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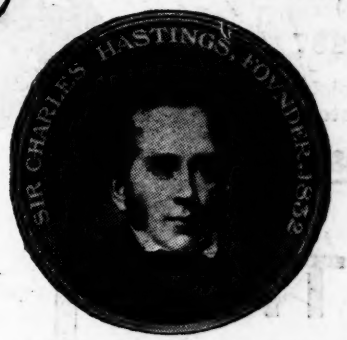

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A CONTRAST IN TREATMENT AND PROGNOSIS.

BY
SIR JAMES GALLOWAY, K.B.E., C.B.,
SENIOR PHYSICIAN TO CHARING CROSS HOSPITAL.

I WISH to draw your attention to-day to two patients suffering from chronic renal disease whose progress we have been watching during the last two months of the summer session and of whom I have spoken to you on various occasions. These patients have shown very distinctly the features and development of two types of disease which differ so much from each other as to indicate clearly that they are due to distinct functional and structural defects. One of these (Case I) is a very characteristic example of disease in which uraemia or azotaemia associated with vascular degeneration gives rise to the impressive symptoms; the other (Case II) is a well marked case in which hydraemia and anasarca are the outstanding features. You will all of you remember the first case—sitting up in his bed propped up with pillows, his nervous, anxious, excitable appearance and conduct, and his frequent attacks of exhausting dyspnoea; and you will not fail to have noted the contrast presented by the other patient—his pallid face and body swollen to the bursting point, his calm and placid demeanour in spite of his exceedingly unhappy plight, possibly rendered more easy in his case on account of the reputed "child-like and bland" disposition of his race. The first of these two cases corresponds to the "interstitial" variety of chronic nephritis, in which, unhappily, our methods of treatment, with the exception of prophylaxis, are not yet very helpful, and the prospect of cure is not good—in the case of our patient his disease ended fatally after a most painful and distressing illness. The second case corresponds to the "parenchymatous" variety of the disease, in which treatment is much more helpful and the prospect is by no means so unfavourable—our patient is convalescent, and begs to be allowed to return to work, as he declares that he is quite fit now to carry out the duties required of him.

CASE I.

Charles C., aged 55 years, was admitted on June 2nd, 1919, on account of dyspnoea. He was a Londoner by birth, his forebears have lived in London for at least two or three generations, and seem to have been a good healthy stock. He was married; his wife and two grown-up sons who survive him are vigorous folk and in good health. There was no history nor any evidence of syphilis in his case nor any indication of gout; in fact, he seems to have enjoyed excellent health until the onset of the symptoms of his present illness. He had always been a good eater, and had taken a certain amount of beer and other alcoholic beverages, but declared very firmly that the amount consumed had always been "moderate." His occupation as an artisan—a worker in wood and metals—had brought him into contact with lead, but he said that he knew about lead poisoning, and that he never had the least symptom of it. Before the war he was in regular occupation, not too arduous in character, but in the early days of the war he obtained employment as a munition worker, and worked harder than had been his custom for a long time. About twelve months before he came to us he noted the early symptoms of his disease; these were failure of desire and power to work, headache, occasional giddiness, insomnia, and especially distressing and unaccustomed attacks of shortness of breath. He had to give up work in consequence, and after being treated at home for the greater part of the year, he came to us.

You will remember that he was a well-formed man of fair complexion, and that his naturally clear and ruddy colour was often dusky as the result of dyspnoea. He had a slight amount of oedema on admission, most evident about the ankles and dorsal surfaces of his feet, but also, though very slight, over the body, so that the stethoscope made a little mark on the chest. This oedema almost disappeared soon after admission, and did not recur to any extent till the later stages of his malady; it did not become troublesome until the last few days of his life, when pulmonary oedema became the serious complication.

The cardio-vascular condition was of special import. The heart showed definite signs of enlargement, the apex beat being palpable about 5 in. to the left of the mid-sternal line. The second sound of the heart was accentuated, especially at the base and to the right of the sternum, and was modified by a rough, though not loud, diastolic murmur. The radial arteries did not give much evidence of degeneration by palpation, but the arterial tension was increased. The systolic blood pressure corresponded to 180 mm. of mercury soon after admission, subsiding to about 160 mm. in a few days; at about this point it remained during his illness. The retinal arteries were more defined than usual, and there were several small haemorrhages in both fundi, at least one of which occurred while he was in hospital. There was little or no evidence of oedema of the retinal tissues or of the optic discs.

The urine was reduced in amount, varying from 18 to 25 fluid ounces daily, with the specific gravity of from 1.018 to 1.025. The reaction tended to be alkaline, there was often a heavy deposit of phosphates, and a certain amount of oxalate of lime was seen from time to time. It contained albumin varying in amount from 0.25 to 1 part per 1,000 by Esbach's measurement and showed hyaline and fatty epithelial casts in small numbers, but no blood was noted as being present at any of the numerous examinations made. The amount of urea excreted in the urine was considerable—on one occasion shortly after admission the specimen contained as much as 4.2 per cent.—an important point to bear in mind in view of the discussion as to the value of the urea test as an indication of the degree of azotaemia, and of the power of the kidneys to extract nitrogenous material from the blood on the one hand, and of the nature and extent of the kidney lesion on the other.

The dyspnoea from which he suffered was peculiar in type and characteristic of his malady. It was clearly paroxysmal, although for hours at a time, even during the most trying period of his illness, he would be breathless, and would breathe more frequently and more deeply than is normal. When the paroxysmal attacks came on he said that he felt a tightness in the upper part of the chest, and would then begin to breathe more often and more deeply until the distress became very great, his eyes would appear staring, he would snatch at the upper part of his chest or neck, as if attempting to remove some obstruction, and he might make an effort to get out of bed or from his chair, and even to do violent injury to himself. In a short time, after perhaps twenty or thirty violent respirations, the breathing would become less violent gradually, and he might return to his normal state and be at peace, or another attack might follow rapidly, or he might relapse into a state of comparatively mild breathlessness. Between the paroxysms there was no period of apnoea, and in this respect the dyspnoea differed distinctly from Cheyne-Stokes respiration. There was no sign of difficulty in expiration or inspiration, as in cases of true "spasmodic" asthma. His own description of his feelings is worth noting. He said that when his trouble was coming on he felt a weight or tightness about the upper part of the chest and throat, there was no pain, and especially there was no feeling of pain radiating along the arms. Then came the necessity of panting and fuller breathing, and this would gradually work up to a point when he felt "as if everything is going to go," and then just after "he turned the corner." The excitement during an attack might be very great. He would shout, attempt to get out of bed, and on one occasion he attempted to reach the window during the night with the intention of trying to throw himself out. It may be imagined easily that he was a very difficult patient to control, that he alarmed the other patients in the ward, and that he tried the tact and skill of sister and the nurses to the utmost.

The treatment of this patient had to be arranged on almost purely symptomatic lines. Rest was obtained for him, so far as was possible, in bed, where he had to be propped up continuously, or on a chair; from time to time he had to be permitted to move about the ward. His great wish during the most severe part of his illness was to get near a window or on the balcony of the ward. The diet was chosen so as to be as easily digestible as possible. A fair amount of protein was given in the form of milk, fish, and occasionally a small portion of easily digestible meat,

but the total quantity of protein was considerably less in proportion to the total amount of food taken than in the case of the normal hospital diet. In addition he had various carbohydrate foods, fruit, and vegetables. He usually said that he had a good appetite and wished to take food, but, as may be guessed, he did not take a great quantity. He was encouraged to take as much water as he felt inclined to drink. Attempts were made to relieve his uraemic state by means of increasing the output of urine. With this intention saline diuretics were freely administered. Digitalis was used and given in as large doses as was thought to be safe, bearing in mind the condition of his vascular system and the increased blood pressure. Theobromine was used and pushed to the utmost. Aperient remedies were used as freely as was advisable.

During the first fortnight our patient made some improvement, shown by the fall of blood pressure, diminution of the dyspnoeic distress, and increase in his feeling of comfort. But during the next month the symptoms gradually became worse, and he passed through the most distressing period of his illness. While in this state various measures were made use of to relieve his distress. On two occasions venesection was performed in order to relieve attacks of uraemic dyspnoea, with no good result. The use of sedatives had then to be considered carefully. The administration of bromides had no effect. One of the valuable drugs in the treatment of such cases is chloral hydrate, and this was employed freely in the first instance, alone and also administered with brandy. A certain amount of relief was obtained in this way. But it was found soon that this remedy had not sufficient effect, and the more powerful and in many ways the most valuable drug in such cases—namely, morphine—had to be employed. The use of morphine in cases of uraemic distress, especially with dyspnoea, has long been recognized to be of great value; but the drug must be administered thoughtfully and with care. In my experience—although it must be admitted that the drug is a most valuable assistant in the treatment of the patient and a merciful means of securing rest—it is rare to find that the patient will recover if it has been found necessary to commence the use of this drug. It must be borne in mind, therefore, if the physician determines to administer morphine in such cases, that in all probability he marks a milestone in the down grade of his patient. It must be remembered also that a very small dose is usually sufficient to secure a good result; it is very satisfactory to observe the rapid relief of the most trying symptoms after the use of a small dose. In this case the dose of $\frac{1}{4}$ grain administered hypodermically was never exceeded, and usually $\frac{1}{8}$ grain was sufficient to obtain the desired relief. At first this remedy was given once in two or three days, but during the most trying period $\frac{1}{8}$ grain was given every evening for eight days in succession. About a fortnight before he died evidence of strain and commencing failure of the heart became noticeable by irregularity of the heart-beat and indications of enlargement of the cardiac area. Along with this there appeared definite increase in the amount of general oedema, and unfortunately the oedema showed a tendency to affect the lungs to a relatively great degree. In spite of these ominous symptoms, the patient did not appear to suffer nearly so much as in the previous stage of the disease. It is true that he lost his mental alertness to a considerable extent, but his distress was much less trying. But even to near the end of his life the paroxysmal attacks of dyspnoea tended to show themselves in the accustomed manner, although not nearly so severely, not so frequently, and for shorter periods. He died two months after admission to hospital owing to oedema of the lungs.

CASE II.

W. T. Y., aged 36 years, was admitted on June 11th, 1919, on account of dropsy. He is a Chinaman, having been born in a country place some forty miles from Shanghai, where his father earned his living as a shoemaker. He says that his father and the members of his family are healthy folk. He has been for many years a wanderer over the face of the earth, usually as a steward on merchant ships, but for the past four years he has settled down as a waiter in a restaurant frequented by his countrymen, near the hospital. He states that he has not suffered from any serious illness previous to the present malady, with the exception of attacks of malarial fever in days gone by, and that he does not take alcoholic drinks. He considers that he has had good general health all his days. There is no evidence of syphilis. The present illness commenced a few weeks before admission, when he noticed for the first time that there was puffiness under the eyes; swelling of the ankles developed later. He soon found that he was not fit to go on with his work because he got short of breath on climbing stairs. The symptoms increased and in consequence he came to hospital.

You will recollect his appearance soon after admission, when the subcutaneous tissues became very oedematous, and the abdominal cavity was distended with fluid. The great anasarca and the characteristic whitish-yellow complexion of his race produced a very remarkable picture of renal dropsy; his appearance and demeanour were in marked contrast to his neighbour C. (Case 1).

The heart and blood vessels were in good condition. The beat was regular and of good quality, and the apex was well within the nipple line. There was no evidence of degeneration of blood vessels, the fundus oculi was normal in each eye, and the blood pressure was not increased. Readings of about 112 mm. of mercury in systole were obtained.

The urine on admission varied in quantity from 26 to 46 fluid ounces daily, with the specific gravity of 1.020 to 1.028, but as the anasarca increased the amount of urine diminished to 10 to 20 ounces daily with the specific gravity of 1.025 to 1.038. The amount of albumin contained in the urine was from 4 to 6 parts per 1,000 soon after admission, but it increased to 6 to 14 parts per 1,000 when the anasarca was at the worst. The reaction was usually acid, and there was little or no deposit. No casts were observed on microscopic examination.

The dropsy, which was the prominent feature in this case, increased steadily in amount in spite of the treatment used during the early period of his residence in hospital. I refrained from tapping him, hoping that a favouring diuresis might be brought about, until the mechanical difficulties in nursing him properly became so great that we had to interfere. By that time, however, the abdomen was full of fluid as well as the subcutaneous tissues generally, and oozing was taking place through the skin at certain weak spots, the elastic fibres of the cutis had given way at the points of greatest strain and "lineae albicantes" had appeared. He was tapped by means of Southey's tubes passed into the subcutaneous tissues of the legs and sides and into the abdominal cavity, and relieved of fluid to the extent of 10 pints. In spite of all these distressing conditions you will remember the calmness with which he bore his illness. He lay quietly in bed and bore his ills with equanimity, drawing my special attention to his condition when oozing of the subcutaneous fluid began to incommode him greatly.

The treatment for this patient was arranged at first mainly with the purpose of securing as much comfort and rest for him as was possible. Rest was obtained in bed without difficulty. The diet was chosen so as to be as easily digested as possible, and consisted largely of milk with farinaceous foods, bread with a certain amount of butter, and a sufficient amount of fruit or easily digested fresh vegetables. The more highly albuminous foods were not excluded, but were limited in amount, but he had in addition to milk a certain amount of fish or eggs, and even small quantities of meat occasionally. The amount of salt allowed was sufficient to make the diet palatable; no free salt was given. The amount of fluid was limited as closely as was thought advisable. A rough calculation of the nutritive value of his diet at this period of the treatment was made, and was found to correspond to about 1,580 Calories, of which about 427 Calories were derived from the protein in his food. The patient was therefore on a low diet, and told us that he was hungry and would willingly take more food. The anasarca nevertheless increased steadily, and his general condition deteriorated. Efforts were made to obtain increase in the amount of urine by various means. Theobromine was administered in as large doses as was thought desirable, the saline diuretics were used freely, and digitalis was tried in order to obtain its diuretic action—but the hoped-for diuresis did not occur. I then determined to make a very thorough change in the character of his diet. In the meantime the anasarca had increased to such an extent that tapping, which I had postponed as long as was possible, became urgently

necessary, and was done in the manner and with the result already mentioned. A certain amount of comfort was obtained for our patient by this means, but not to such an extent as could have been wished, and for a day or two it appeared as if the fluid were reaccumulating, especially as no increase in the outflow of urine occurred. The new diet was commenced within a day or two of the tapping. It consisted of bread, rice, green vegetables, and fruit; the amount of milk was increased, and in addition he had two or more eggs daily; as he had been told that his diet was to be increased he asked if he might have rabbit, so rabbit cooked in various ways formed part of his menu, alternating with fish. The amount of fat in the previous diet was cut down, and this he felt to be a distinct deprivation, inasmuch as he no longer had butter. The nutritive value of his diet under the new regimen increased till it corresponded roughly to 2,625 Calories, a much larger proportion of this amount being derived from albuminous foods and little from fats. The result of this change in the dietary was remarkable. In three days after the new diet was commenced the amount of urine had increased from a daily output of from 16 to 20 oz. to 42 oz.; it remained for a week at the level of 36 to 48 oz. daily; the amount then increased again largely to 48 to 64 oz., and in seventeen days from the commencement of the new, highly albuminous dietary the output was no less than 94 fluid oz. in one day—the true "polyurie libératrice" was established. Concurrently with this polyuria a fall occurred in the specific gravity of the urine from 1.038 to 1.015, the amount of albumin diminished from 14 parts per 1,000 to 0.5 part per 1,000, and the anasarca vanished. His general condition underwent a marked change for the better, so much so as to allow of his getting up and moving about the ward and into the open air. The remarkable feature of this change for the better was the rapidity with which the favourable conditions made their appearance. Within three weeks our patient had passed from the condition of a man whose life was threatened by a dangerous illness to that of a convalescent who feels so well that he begs to be permitted to return to work at the earliest moment.

This experience may be claimed as another piece of evidence that the plan of underfeeding our patients suffering from chronic nephritis with dropsy as the chief symptom, especially by diminishing the amount of albuminous foods in the dietary, requires reconsideration and amendment, and that the recommendations made by Dr. Epstein, of the Mount Sinai Hospital, New York, have firm foundation in clinical experience. You will recollect that Sir Clifford Allbutt has given his favourable experience of the dietetic treatment of such cases on the plan which has given so good a result in this case.

During the summer session I have drawn your attention to certain aspects of recent experimental and clinical observation on the subject of renal disease recorded by various workers in France, in the United States, and in this country, and to certain tests that have been employed with the view of ascertaining the efficiency of various functions of the kidneys. At the close of the session I would recommend you all to read a paper by Dr. Albert A. Epstein in the *American Journal of Medical Sciences* for November, 1917 (vol. cliv, No. 5, p. 638), in which he gives his views on the subject of treatment; and not to forget to study a Report to the Medical Research Committee on an Investigation into the Effects of War Nephritis on Kidney Function by Drs. H. MacLean and De Wesselow, published in the *Quarterly Journal of Medicine* for July, 1919 (vol. xii, No. 48, p. 347).

The fund of the Harvard Infantile Paralysis Commission has reached a total of £8,050.

In the *Medical Journal of the Siamese Red Cross* for December, 1918, Dr. M. E. Barnes, Representative of the International Health Board, Rockefeller Foundation, states that in Northern Siam of 20,209 persons examined for hookworm disease 15,458, or 76.4 per cent., were found infected. *Necator americanus* (Stiles) is the species of nematode ordinarily found in Northern Siam. Very advanced cases are seen occasionally in the northern provinces, though at present they are somewhat infrequent in Siam as compared with Ceylon and Java. Measures are being taken by the Government which, it is hoped, will stamp out the infection. Among the anthelmintics used thymol and oil of chenopodium have proved especially valuable

SOME PRACTICAL CONSIDERATIONS ON THE OPERATION FOR REMOVAL OF ADENOIDS AND ENUCLEATION OF TONSILS.

BY

W. H. BOWEN, M.B., M.S.Lond., F.R.C.S.,

ASSISTANT SURGEON, AND ASSISTANT SURGEON IN CHARGE OF EAR, NOSE, AND THROAT DEPARTMENT, ADDENBROOKE'S HOSPITAL; FORMERLY SURGEON TO THE EAST LONDON HOSPITAL FOR CHILDREN AND THE ROYAL EAR HOSPITAL.

This paper makes no pretence to an elaborate review of the indications for operation nor yet the methods of operating, but aims rather at setting out practical considerations gradually forced upon one by an experience covering some fourteen years. The relatively new operation of complete enucleation of tonsils by the guillotine alone, as opposed to the crude and uncertain cutting which had been the custom for so long, opened up a satisfactory era to the surgeon in charge of a special clinic. It gave confidence in the results of the operation, since he felt that now the whole infective focus could be removed, with the most ordinary attention to a simple method, thus making the probability of cure much greater. Disappointment was inevitable to those who, like the writer, watched the result of the older operation of cutting for many years after the operation had been performed, and saw recurrence of trouble follow in the remnants of the tonsil. Dispassionately considered, many cases could only be described as failures; and until some method had been devised whereby the disease could be removed completely, without having recourse to the dangerous and exhausting methods of enucleation then employed, it seemed that these disappointing half-measures must be tolerated.

The method of complete enucleation introduced by Drs. Whillis and Pybus[1] solved the problem. It is simple and quickly mastered, the diseased tonsils are removed in their entirety, the ordinary Mackenzie guillotine can be used (reversed), and, as is so important, the whole operation can be performed in sixty seconds or less after very little practice by anyone used to the guillotine; that is to say, the operation can be performed as quickly as the former cutting operation, and with incomparably greater benefit to the patient.

Haemorrhage and sepsis, the former having a distinct bearing on the latter, are the two risks of the operation. Their avoidance demands anxious attention. The plan of preparation with this end in view set out below has been gradually evolved, and, whilst it is difficult to prove its worth, the comparative study of a large number of cases has been sufficiently convincing to justify its being tried by others.

The aims of the operation are by removing adenoids to eliminate a source of continuous infection from the nasopharynx and to make nose breathing possible, and by enucleating the tonsils to remove an actual or potential infective focus from the throat. Furthermore, it must be strongly insisted that the proper time to perform the operation is early childhood. Probably the ideal time is from three to six years of age, for childhood is the time of these hypertrophies, and failure to treat them in the early stages, especially the enlargement of the nasopharyngeal tonsil (adenoids), leads to the troublesome complications which the aurist especially sees in later years.

The relation of enlarged tonsils and adenoids to diphtheria carriers is worthy of the closest attention, and this paper endeavours to emphasize its importance.

Indications.

Of all the indications for operation the forestalling of deafness is the most important. It is no unusual thing for a mother to bring a child and to say that he is inattentive and will not listen to what she says. It is often called "naughtiness," but can easily be shown to be due to loss of hearing power by turning the child's back to the speaker and then asking for a repetition of words said. It is usually quite easy to assure the mother that the child is deaf by getting her to ask the child to do something whilst its back is turned to her. The child will hear words spoken but not pick up the individual words, and is therefore unable to grasp the order or request. On turning round and facing the mother, and getting the additional assistance of watching her lips, the child will respond,

showing that it is not a question of obedience. It is the limitation of a sense, not a perversion of the brain.

On examining the membrana tympani, it will be found that there is some thickening of the drum as a whole, and already retraction. At times there may be marked foreshortening of the malleus, and a condition which in an adult would almost make one despair. In a child it may be viewed with the greatest optimism, for the drum will recover absolutely when the cause has been removed. In other cases there are attacks of pain in the ear or ears due to subacute catarrhal inflammation of the middle ear. If neglected it may lead to an acute inflammatory infective process with suppuration and perforation. All these conditions may occur independent of adenoids. Acute infective catarrhal rhinitis and nasopharyngitis may lead to infection of the middle ear, for instance, but such diseased conditions are usually secondary to enlargement of the nasopharyngeal tonsil (adenoids). Justice has not been done to deafness, otalgia, or discharging ears in a child until the question whether adenoids are present has been answered in the negative. In acute mastoid disease, which comes under observation as a definite surgical disease demanding immediate treatment, unless the surgeon keeps in mind the fact that it is the result and not the cause he may relieve the immediate acute symptoms but leave a chronic infective process behind. The operation on the mastoid should invariably be followed by an examination of the nasopharynx (it can easily be done at the end of the operation), and if there are any adenoids at all they should be removed, for the disease, if there be no definite pneumococcal lesion elsewhere, begins in the nasopharynx; if adenoids are present and are allowed to remain as a focus for continuous reinfection, the chances are that whilst the wound behind the ear heals the discharge from the meatus continues, so that later on a discouraged surgeon is driven to a radical mastoid operation with all its drawbacks.

Other conditions calling for attention and differential diagnosis are those associated with catarrhal rhinitis. This may be due to an ordinary infective cold, to ethmoid disease, or to irregularities of the nasal septum; but the commonest cause of persistent cold in the nose in children, or of recurrent winter colds, is adenoid growth. There are degrees of obstruction produced by adenoids, varying with the varying congestion of the parts. A parent may say of a child that his breathing is so heavy that she fears he will "choke in his sleep," and on the other hand an intelligent mother, when told that her child's deafness is due to adenoids, will exclaim: "But he always sleeps with his mouth closed." This is quite possible with a small hypertrophy of the nasopharyngeal tonsil in a roomy nasopharynx.

Sometimes the child is brought for mouth breathing without a history of deafness or of colds. In young children, having put out of court deflection of the nasal septum and polypoid formation from ethmoid disease, the diagnosis of adenoids is safe; their removal imperative. It is interesting to note the dental decay which sometimes follows on mouth breathing. Sometimes mouth breathing is denied when it is possible to demonstrate that the incisor teeth of the upper jaw are dry over a crescentic area exposed by the slight retraction of the upper lip. This crescentic area arches from biting edge to biting edge of each lateral incisor with the concavity down. It is due to exposure of the lower part of these teeth by the slight retraction of the upper lip; they become pitted and decayed, and then destruction from biting edge to gums often follows. It is quite possible that a focus of infection is thus produced which is followed by the extensive dental caries so often found in these cases. Children are often brought for a chronic irritable cough which to the parents is the only clinical manifestation of chronic catarrhal pharyngitis secondary to the hypertrophic lymphoid tissue. A cure can be promised on removal of the cause and on the establishment of nose breathing.

Enlarged glands in the neck may or may not be due to enlarged tonsils. In the majority of cases no gross lesion is discoverable, and the advisability of operation for removal of the glands, primarily diseased, must be judged by the rules generally laid down. When, however, the enlarged glands are associated with the definite clinical manifestations of tonsillar enlargement, it may be, and probably is, sound to look upon the throat condition as the primary lesion. The primary focus should obviously be dealt with first, with a hope that the enlarged glands, reasonably regarded as secondary, will disappear later. It has always been my aim to safeguard the patient by minimizing loss of blood, shock, and any possible later exhaustion. It is quite wrong to operate on such patients in the out-patient department and send them home afterwards. In some cases the glands may require operative interference later, being too far involved in tuberculous disease to recover naturally; but where it is possible to prepare in advance and impose sound hygienic surroundings at the time of operation and afterwards I have never known the "breaking down" of the glands to follow immediately on operation on the throat and nose.

The subject of the tonsils and adenoids as carriers of the *B. diphtheriae* has been of great interest to the writer ever since he accidentally stumbled on a case some years ago. The case was reported at the Cambridge Medical Society, and briefly stated was as follows:

A boy aged 16 was sent home from a training ship where an epidemic of diphtheria had prevailed, and before his return a negative swab from the throat was demanded. He had never had diphtheria, and was apparently in the best of health. To my surprise the swab was returned as positive. The boy was isolated and antiseptic swabbings and gargles employed; but at the end of fourteen days the swab was still positive. The tonsils were large and congested, and it seemed quite possible that the crypts of the tonsils harboured the organisms. At this time I did not know that this view of the matter had been anticipated by some German practitioners, who, acting upon it, had removed the tonsils. I decided to remove the tonsils, and was prepared to give antitoxin beforehand. Dr. Graham Smith, lecturer on hygiene to Cambridge University, of whom I sought advice, agreed with the advisability of removal of the tonsils, but did not think there was any need to give antitoxin. His advice I followed. The operation was performed on March 27th. Convalescence was uneventful, and on April 13th the throat was free from *B. diphtheriae*. After the boy's return to the ship another epidemic of diphtheria broke out, and the boys were sent home again. Examination of his throat showed a few *B. diphtheriae* present on one occasion. They soon disappeared. The operation was incomplete. It was in the days before I attempted enucleation; the tonsils were removed without anaesthesia, and no attempt was made to clear the nasopharynx (he was a nose breather).

Dr. Graham Smith took the matter up, and at the time war broke out had accumulated a large amount of valuable material. He has allowed me to refer to some of the microscopical sections of tonsils removed in carriers of diphtheria; they show the difficulty of any attempt to clear the organisms from the bottom of some crypts. In one case the crypt, after running about half the depth of the tonsil, suddenly turned upon itself at an acute angle, and ran down to the very base of the tonsil (capsule), where it expanded into a small cavity full of bacilli.

The view that the carriers of diphtheria usually have enlarged tonsils is so strongly implanted in my mind that on one occasion when there was clinical proof that a diphtheria carrier was in the children's ward at Addenbrooke's I told the house-surgeon that by looking at the children's throats I would tell him the offender. The ward is not a large one. I found one child with very markedly enlarged tonsils (and adenoids), and this child yielded a positive swab. The possibility of persistence of infection in the fossae and sinuses of the nose after removal of tonsils and adenoids cannot be ignored, but the investigations so far carried out suggest that once the hygiene of the nose and throat has been improved by operative interference on the lines indicated there is a natural tendency to cure.

Other infections of the tonsillar crypts may give considerable trouble and waste much time. As an example may be quoted the case of a lady over 30 years of age, the wife of a doctor, who suffered every winter from recurrent tonsillitis. Usually three attacks occurred each winter and laid her up for a week at a time. The tonsils were only slightly enlarged, but as the attacks were follicular tonsillitis there could be no doubt that the tonsils were the centre of disease, and only by enucleation could permanent health to the throat be restored. Therefore, with every preliminary precaution, I enucleated the tonsils completely a year ago. The patient has never had an attack of tonsillitis since.

Anatomical.

It is unfortunate that the term adenoids has been applied to hypertrophy of the pharyngeal tonsil. It gave the idea of a multiple rather than of a single structure; and there are still people who expect to remove

several individual structures at operation and who take several strokes with the curette to do it. I teach the men at Addenbrooke's Hospital that to fail to remove the pharyngeal tonsil in one piece and at the first attempt is as bad as failing with a faucial tonsil.

When removed, the pharyngeal tonsil (adenoids) is seen to be an oblong structure with the longer side vertical; it has a marked central cleft and one or two lesser lateral clefts. The clefts are in the long axis of the mass. The central cleft is deep, so deep sometimes as almost to divide the mass into halves. It is quite possible in rapid digital examination for adenoids that the finger may slip up this central cleft, the soft vascular mass slipping away on each side, so that a false sense of clearness of the nasopharynx is obtained. With the deliberate examination unopposed, which is possible under an anaesthetic, such an error is not likely to occur.

One of the essentials of the modern operation of enucleation of the tonsils with the reversed guillotine is to press the buried portion of the tonsil into the guillotine. If the thumb is pressed backwards and slightly inwards on the convex spherical surface immediately outside the anterior pillar of the fauces it is pressing on the anterior half of a hemispherical body which is the buried portion of the tonsil.

The macroscopic appearance of a tonsil is very variable. There is often a cleft running downwards and backwards; sometimes it almost divides the tonsil into two portions, and the postero-inferior portion being hidden from view unless looked for, it is quite possible in an imperfect light or a hurried anaesthesia to slip the edge of the guillotine into the interval between the two portions of tonsil and take away the antero-superior portion only. A tongue of tonsil, not visible as a separate structure, runs up into the soft palate nearly as far as the uvula. It is probable that it is infection of this part of the tonsil with imperfect drainage which leads to the condition known as quinsy. In the former imperfect cutting operation this palatal part of the tonsil was not touched, and in consequence the risk of quinsy was not eliminated.

Age Considerations.

As to the best age to operate for tonsils and adenoids certain rough guiding rules may be given. Unless there are very strong indications, it is advisable to wait until the child is 2 years old. The "strong" indications are summed up as discharge from the ears, or repeated earache. Very seldom does the critical surgeon derive any satisfaction from the attempted removal of adenoids in a child under 2 years of age. At the same time it is extremely simple to give such a child a whiff of chloroform and explore the nasopharynx with the little finger of the right hand, and if there is any enlargement present, remove it with one sweep of a small curette. I have never done this in a child under 1 year, and rarely under 2 years old, but when I have to do it I prefer to use a curette for the removal and not the finger-nail.

No dogmatic answer can be returned to the question whether if the tonsils are definitely enlarged they should always be removed. I would go so far as to say, however, that once the tonsils have been the seat of tonsillitis they should be removed. If the tonsils are only slightly enlarged, but with no history of disease, and the child is under 4 years of age, I am content to remove the adenoids only, on the understanding that the parents realize what is being done. Alone it is a trifling operation, but combined with enucleation of tonsils it is quite severe. Parents must be warned in such cases that nose-breathing after operation is vital to success. It must not be forgotten that some children of 2 are much stronger than others of 4. In out-patient work one must be guided by the distance the children have to travel home and the climatic conditions at the time.

It cannot be too strongly impressed upon those responsible for these operations that the removal of the adenoids is the essential. They are the main obstructive growth and the origin by proximity of the ear complications. At the same time they are hidden away in the nasopharynx, whilst the tonsils cry out for recognition to anyone with eyes in his head. I tell the men at Addenbrooke's Hospital that their failure to remove tonsils I can condone, for I can see their failure for myself; but their failure to remove the adenoids completely and finally is an unforgivable offence; for their removal is assumed after an operation; incomplete operations may not avert the ultimate danger of deafness.

Preparation of the Patient.

The two complications to be feared after an operation for tonsils and adenoids are haemorrhage and sepsis. Functional success will be obtained if the patient become a nose breather; to obtain this the co-operation of the parents or friends is required. The friends should have it drilled into their heads by the emphasis of repetition. At Addenbrooke's Hospital we tell each mother individually when the child is brought to the surgeon for the first time: "This operation is no good unless you teach your child to breathe with the mouth closed afterwards. Make him lie on his back for ten minutes three times a day and breathe with his mouth closed until he does it day and night without trouble." This is the formula which is reiterated in substance when the out-patient letter recommending operation goes before the sister in charge. After the operation the sister or a nurse goes into the room where the children are waiting, just prior to leaving hospital, and once more emphasizes the importance of nose breathing and the closed mouth. Anyone who does much ear, nose, and throat work will agree that this is not a trifling matter. Ofttimes the child remains a mouth breather after the operation; not that the obstruction remains, but that the cure has not been consolidated by after-treatment. With every additional year after 4 years old the natural closing of the mouth without education is less and less likely to be obtained. From 12 years old onwards this effort to get a functional cure is the most serious aspect of the operation. I have had children brought to me who have had the operation done years before, who have open mouths, narrowed nostrils, and deafness; and the mother usually tells the story that the adenoids were removed, but they have grown again. Often on examining the nasopharynx with a finger it is found quite clear. Usually the mother has never been told to give the child breathing exercises, and unless the need for them is impressed on her, and driven in by repetition, they will be neglected and soon forgotten. My experience is that the failure to emphasize the importance of after-treatment, and to control it by system, is an unsatisfactory feature in hospital treatment. My conviction from experience is that adenoids do not grow again if they are properly removed. The bad results are due to one or both of two causes—the first being imperfect removal, especially cutting them obliquely from above downwards, so that the upper half or third is left; the other, failure to emphasize the importance of nose breathing. Systematic breathing exercises several times a day have not only the advantage of regularity of practice, but they have a mental and suggestive element of much importance.

Haemorrhage and Sepsis.

Of the complications haemorrhage is to be put first, since it plays a great part in so lowering the vitality as to make the patient liable to sepsis; moreover, it has been by far the commoner complication. I have had several very bad cases, and whilst death has never resulted, the greatest anxiety has been felt more than once. There is more risk of severe haemorrhage after tonsillectomy with increasing years. I have never seen severe haemorrhage in a small child. The cases I have encountered have usually been in people over 15 years of age, with a history of recurrent tonsillitis, much congestion of the whole oropharynx, and permanent dilatation of vessels. If tonsillitis is present or there has recently been an attack of tonsillitis, the blood supply is almost certainly excessive. One of the first rules to lay down, therefore, is that no operation shall be performed until all recent acute congestion has disappeared. I insist on a month elapsing since the last attack. To lessen the congestion as much as possible it has seemed advisable to give a mild astringent gargle after meals and at bedtime, such as alum 5 grains to the ounce. Furthermore, since mercury is believed to have a beneficial depleting effect on the throat and nose, when employed as a purgative, a dose of calomel is given two nights before operation, followed by saline next morning. After the calomel I usually advise no more meat until after operation—for two reasons: first, that no portions shall be left round the teeth as infective foci, and, secondly, that the proteins shall not raise the

blood pressure immediately before operation. The night before operation and on the morning of operation a dose of calcium lactate is given. In a delicate anaemic child I usually advise iron for about two weeks beforehand. After operation the patient is not allowed to get up and walk out from the operation room. This may easily be followed by severe bleeding, especially in adults. They should be removed on a stretcher or in a chair.

My experience is that if the risks of haemorrhage be avoided, if the child be protected against shock, and if no operation is performed in the presence of active microbic invasion, there is no risk of sepsis. Surgeons do not take any risks with fingers or instruments in the present day, and if infection occurs it is probably due to the calling into infective activity of some hitherto saprophytic organism owing to lowered vitality. The avoidance of lowered vitality resolves itself practically into an insistence on the maintenance of body heat. Excessive fasting, cold operation room or recovery room, hurried departure with waiting at a station, and a tedious journey afterwards are the risks run by the out-patients of hospitals. If possible the child should not have starved for more than four waking hours. The temperature of the operating room should be 60° or 65°, and so should that of the recovery room, and no draughts should be allowed. This is difficult to enforce with the modern nurse brought up to a purely empirical outlook with regard to fresh air and open windows; it is the open window of the ward which, by abstracting heat from the restless child who has thrown his covering off, leads to the complications which are liable to follow on operation in in-patients.

In winter it is not justifiable to operate on children and afterwards to send them home any considerable distance. After operation I advise that children be kept in bed for a week. At the end of this time the grey, sloughy appearance on the fauces will have practically disappeared.

Anaesthetics.

I am against ether as an anaesthetic owing to the congestion and secretion set up. When I first began operating for tonsils and adenoids, about 1904, we used chloroform at Guy's; but on its introduction turned to ethyl chloride, and in hospital practice I have continued it ever since. It is much quicker than chloroform, an important consideration when you have twenty patients waiting for operation. It gives a long period of anaesthesia, and having been used now for over a dozen years without any mishap the old forebodings should be put aside. Dangers, however, attended the use of somnoform, the mixture which preceded the introduction of pure ethyl chloride. The objection to ethyl chloride has been that children object to the sudden concentrated vapour used in the closed apparatus. This is a drawback, especially with nervous children, and on this account, in private, I have always used chloroform. With the introduction of the open method of administering ethyl chloride this drawback disappears, but I doubt whether ethyl chloride will ever supersede chloroform in cases where time is of no importance and gradual induction and maintenance of confidence is to be desired. With the closed method of administration of ethyl chloride the gag must be put in before the anaesthetic is begun. I always use a Doyen's gag propped well open at the start; it is not made to lever open a jaw which is firmly closed. In a child of about 5 years old and onwards the teeth are not very firm in the jaw in front, and the rough handling of a gag may easily knock them out. If, with ethyl chloride, the child begins to cough, I stop the anaesthetic, and if the trouble begins again on restarting, resort to chloroform, but this is very rarely necessary.

The usual dose of ethyl chloride is 3 c.cm.; the usual stages are ordinary breathing or a short struggle, then a period when there is stoppage of breathing but with corneal reflex present and no change in colour, followed by a period of deep respirations. After about three of these the operation is proceeded with. The stages of ethyl chloride anaesthesia are, however, very unreliable, and this must be counted as a drawback to its use. A very deep anaesthesia has no dangers with it unless an inexperienced operator begins whilst every reflex is abolished. This is the danger with any deep anaesthesia, whether ethyl chloride or chloroform. It is best if in any doubt to put the finger into the throat and gently touch the fauces. If there is no suggestion of a contraction it is best to wait. The very slightest movement of the pharyngeal muscles justifies proceeding with the operation. The only danger I have encountered, excluding haemorrhage, has been due to too deep anaesthesia, abolition of the coughing reflex, and blood collecting in the larynx, where it may easily clot and, if not dealt with promptly, lead to asphyxial signs. A vicious circle is established of dyspnoea and venous congestion. The condition is very easily dealt with. The child is turned over on to its face, a finger put down to the aperture of the larynx, and any blood clot hooked forward; usually it will flow out without assistance.

The child should be wrapped in a sheet with the arms secured. This permits the child to be controlled on recovery, and especially in the struggling state which may occur where imperfect anaesthesia or inexperienced surgery leads to partial return to consciousness before completion of the operation.

Operation.

Once the fundamentals are grasped and a little practice obtained, the operation of enucleation of tonsils is quite as simple as the older cutting operation. It is essential, however, to be able to see what you are doing. In the old cutting operation the horizontal grooved supports with the curved end, into which the blade was forced and between which the tonsils were extruded, acted as a protection to the anterior and posterior pillars of the fauces, preventing their being cut; so that to anyone with ordinary experience the operation could be done quite blindly and when the mouth was full of blood. This is not possible with the modern enucleation method. It is essential to see, because the posterior border of the guillotine—that is the margin of the circle which encloses the tonsil—is slipped behind the posterior border of the tonsil. The guillotine is reversed so that the handle is directed to the opposite side—that is, for removal of the right tonsil the handle is directed to the left side. Furthermore, this edge of the guillotine in the groove between the posterior border of the tonsil and the posterior pillar of the fauces is pressed very firmly outwards until the long axis of the guillotine lies obliquely across the mouth. The line of this axis is from the juncture of tonsil and the posterior pillar of the fauces to the opposite molar teeth. When firmly fixed in this position the whole guillotine is pulled a little forward, if the tonsil is sufficiently enlarged, to allow leverage on the tonsil. Thus the tonsil is fixed and rendered prominent.

The next manipulation is to press the buried portion of the tonsil through the circle of the guillotine by pressing on the spherical bulge just outside the anterior pillar of the fauces. When this is pressed backwards and slightly inwards the deep portion of the tonsil is pressed through the guillotine. I generally use the thumb for this purpose. With a large tonsil and a small-sized guillotine, a short massage-like pressure may be required to get the tonsil in, but it is best to use a guillotine as small as possible, and it is wonderful how large a tonsil can be massaged through a small guillotine. The advantage of the small guillotine is that the tonsil gets jammed into it. With the deep portion of the tonsil thus pressed into the guillotine and steadied by the slight forward pull of the posterior edge of the guillotine on the posterior border of the tonsil, the blade of the guillotine is driven home. It cuts through the mucous membrane at the juncture of tonsil and anterior pillar of the fauces, and then, taking the line of least resistance, passes between the tonsil capsule proper and the pharyngeal wall. The guillotine must be sharp enough to cut through a thin layer of mucous membrane and blunt enough to take the line of natural cleavage between tonsil and pharyngeal wall. When tonsillotomy was practised, it was known that a guillotine with a sharp edge shot quickly home led to troublesome haemorrhage, whereas a blunt guillotine by a half-crushing action reduced haemorrhage to a minimum. At the same time the guillotine must not be so blunt as to be unable to cut at all, for after cutting through the mucous membrane of the anterior pillar at its junction with the tonsil and slipping between tonsil and pharyngeal wall, it comes up against the mucous membrane at the junction of tonsil and posterior pillar of the fauces. In this thin layer of tissue to be cut through there are blood vessels of which it is desirable to obliterate the lumen by the trauma of a

crushing action. When this posterior line of attachment has been reached the pressure of the thumb of the hand holding the guillotine should not be enough to force it home, owing to the bluntness of the guillotine; it is at this juncture that the other thumb should cease to press on the anterior pillar of the fauces, and the hand thus freed be used to force home the guillotine. The tonsil will always come away with the guillotine, owing to this crushing of the tissues. Since it is necessary to get a good view, it is advisable to pass immediately from the one tonsil to the other before blood obscures the view. Failure to see means that the furrow between the tonsil and the posterior pillar of the fauces may not be hit off, and that the anterior pillar of the fauces may be damaged. I often take away a thin edge of mucous membrane on the anterior pillar of the fauces. It is easily done without touching the musculature. After the enucleation of tonsils a definite smooth-walled cavity corresponding to the buried portion of the tonsil is felt with the finger. On examination of the tonsil the surface of the buried portion will similarly be seen to be smooth with the thin grey capsule of the tonsil covering it. The completeness of this capsule is the demonstration of complete enucleation.

Sometimes, especially in adults, the tonsils have to be removed when there is no faucial prominence at all; there may be an excavation. In cases such as this the operation presents no increased difficulties, since the posterior pillar of the fauces is a guiding mark to the posterior border of the tonsil. Visibility is all-important to maintain the position of a guillotine whilst the tonsil is pressed into the guillotine. I have removed a tonsil which on examination afterwards was cup shaped, consisting of an excavated buried portion of tonsil only.

The removal of adenoids calls for no other remarks beyond what has been said with regard to removing them with one sweep of the curette. It is always well to feel and steady the curette against the posterior border of the nasal septum where it touches the roof of the nasopharynx. This can quite well be done without any damage to what is a relatively fragile structure. One quick sweeping movement with maintenance of pressure backward on to the pharyngeal wall is then all that is necessary. At the end of operation the child can be turned sideways or face downwards to allow of the escape of blood; but is kept wrapped up, to avoid struggling, until such time as consciousness returns.

REFERENCE.

[1] On Enucleation of Tonsils with the Guillotine, by S. S. Whillis, M.D., and C. F. Pybus, M.S., F.R.C.S., BRITISH MEDICAL JOURNAL, November 25th, 1911, p. 1402.

A METHOD OF ENUCLEATING TONSILS WHICH LESSENS BLEEDING.

BY

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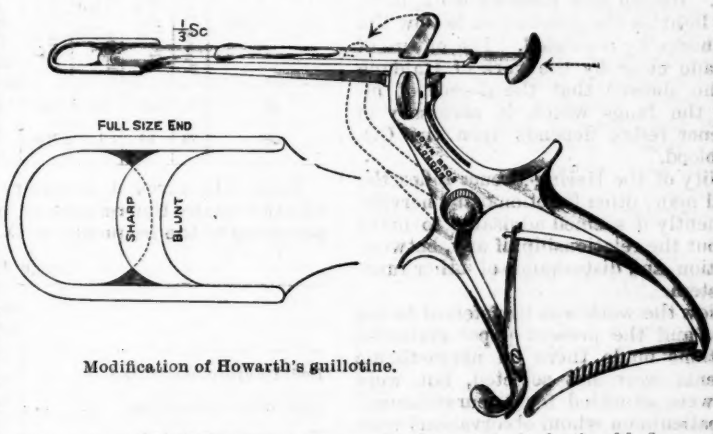
THE "reverse guillotine" method of enucleating tonsils, first described in this country by Whillis, is, I suppose, that most commonly now employed, and I personally use it almost exclusively, except that I use my thumb, and not my forefinger, to press the tonsil through the guillotine ring; and after trying various guillotines I came to the conclusion that the Howarth guillotine, with sharp and blunt blades, was much the most convenient of the instruments made for this purpose. I have come to use the blunt blade only in the vast majority of cases, keeping the sharp blade in reserve for cases where the fibrous attachments of the tonsil are so tough that they do not readily give way to the blunt blade—a condition found only in a small minority of cases operated on.

To obviate bleeding, and also to lessen the liability of the patients either swallowing blood or sucking blood into the larynx, I have recently somewhat modified my methods. It is much more convenient to engage the tonsil in the guillotine with the patient on the back than on the side, but to prevent blood from accumulating in the pharynx, with risk of its passing into the larynx or oesophagus, I like to have the patient on the side with the face turned somewhat down before performing any cutting, so that any blood runs down out of the mouth.



Modification of Howarth's guillotine.

I adopted, accordingly, the following procedure: The patient is anaesthetized on the back and the operation field well illuminated with a head lamp or frontal mirror. Standing on his left side facing him, I first engage the left tonsil in the ring of the guillotine, shut down the blade by the handle lever and give this closed handle to an assistant (usually a nurse) to hold, and then engage the right tonsil with the second guillotine and close the blade and hold the handle myself.

On this being completed, the patient is turned on to the left side and the face turned somewhat down. Up to this time there is practically no blood in the mouth, and as the mouth is now turned down, any blood from the subsequent operative procedure will run out of the mouth over the edge of the operating table. This manœuvre almost completely obviates the swallowing of blood during the rest of the operation.

I now remove the tonsils, and I do so not by cutting out or tearing out; but, using the closed instrument in the same way as a pressure forceps is employed to perform torsion on a small artery, I twist the tonsil until the pedicle of fibrous tissue, engaged between the guillotine blade and the ring, containing the principal blood vessels of the tonsil, gives way.

In this way the bleeding from the tonsils is reduced to a minimum. The tonsil is removed in its capsule, and with rare exceptions the removal is complete. If necessary, adenoids are now removed with the face still turned somewhat down, so that blood from these also runs out of the mouth. On completion of the operation the patient is turned completely over on to the chest and face, with the head hanging down over the edge of the table, and on removal to bed or recovery couch, care is taken that the patient is not allowed to lie on the back until there is a considerable degree of recovery from the anaesthetic.

The inconvenience of handing the closed handle of the guillotine to an assistant to hold, and the risk of slipping involved, soon made it evident that it was desirable to employ, for the first guillotine at least, one with a locking attachment to lock the blade, such as the ratchet of the Elphick "haemostatic guillotine."

The Elphick guillotine, however, has the handle attached to the blade at right angles, and as the obtuse angle position of the handle in the Howarth guillotine has a great advantage, and also as the serrated edge of the crushing blade of the Elphick has no advantage which I can see, I got Messrs. Down to make me a guillotine which is really a modification of Howarth's.

The principal modification is the ratchet attachment to lock the blade in the closed position, but I had the guillotine made also with interchangeable ring and blades for different sizes of tonsils, and with the blunt blade very blunt. A small modification, but an important one, is that the end of the lever pushing the blade home is turned over to hold the sliding blade down to its bed, as I found in some of my Howarth's guillotines that firm pressure on the handle sometimes forced the sliding blade to ride up

over the end of the lever—a rather awkward *contretemps* in the middle of an operation.

The instrument can also be used as a haemostatic guillotine, and left *in situ* for five minutes, as advocated by La Force.

I find by the method above described that while in the vast majority of the cases removal of the tonsil is complete, there is no greater amount of sloughing of the bed of the tonsil than when a sharp blade with cutting edge is used. The loss of blood is markedly lessened, as also the risk of serious haemorrhage. The amount of blood swallowed is reduced to a minimum.

The sister in charge of my recovery wards is quite clear that post-operative sickness is lessened, and in consequence, where patients have to go home the same day, as in hospital practice is often unfortunately necessary, they are sooner fit for removal.

RELATION BETWEEN THE GENERAL NERVOUS SYSTEM AND SYMPTOMS OF "D.A.H." IN NEURASTHENIC PATIENTS.

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AN investigation[1] carried out by one of us in conjunction with J. S. Haldane and J. C. Meakins at No. 15 Canadian General Hospital, Taplow, during 1918, on patients suffering from symptoms of D.A.H.—chiefly in consequence of irritant gas poisoning—led to the recognition of the importance of the symptom of shallow breathing. This symptom appeared to be due to some abnormal upset of the Hering-Breuer reflex.

Hering and Breuer[2] described in 1868 the reflex control of the respiratory movements. Their experiments proved that inspiration and expiration are initiated in response to afferent impulses passing up the vagus, and that a state of deflation or inflation of the lungs provides the stimulus which originates the impulse leading to inspiration and expiration respectively. Hering and Breuer's work, however, did not throw any light on the question as to how the depth of breathing is normally regulated. The nature of this regulation was made clear by the work of Haldane and Mavrogordato,[3] who showed that the degree of inflation or deflation of the lungs which is necessary to excite the Hering-Breuer reflex depends upon the CO_2 tension of the arterial blood.

Besides the abnormality of the Hering-Breuer reflex the patients also manifested many other functional and nervous symptoms, and consequently it seemed advisable to make some attempt to work out the relationship, if any, between their abnormal respiration and disturbance of other functions of the nervous system.

With this object in view the work was transferred to the Ashhurst War Hospital, and the present paper embodies the results of observations made there on neurasthenic patients. These patients were not selected, but were taken at random. All were admitted for "neurasthenia." The total number of patients on whom observations were made was 100.

The first point to which attention was directed was the prevalence and severity of D.A.H. symptoms among patients admitted for neurasthenia, and with this end in view the patients were all subjected to the following examination as far as possible:

1. Pulse rate at rest.
2. Pulse rate after two minutes' work on a bicycle ergometer at 3,170 foot pounds per minute.
3. Time taken for pulse to return to resting rate.
4. Rate of respiration sitting quietly in chair.
5. Rate of respiration sitting quietly and breathing through inspiratory and expiratory valves so that the volume could be measured.
6. Volume per respiration and volume per minute.
7. Vital capacity.
8. Time during which the breath could be held (*a*) in inspiratory, (*b*) in expiratory position.

In addition a note was made of any spontaneous complaint by patients of shortness of breath on exertion.

It may be well here to point out one difficulty which we experienced—namely, that the observations were made at very varying times after the onset of symptoms and after various kinds of treatment. Hence the patients had recovered to different degrees. In considering the results it was noticed that the patients exhibited a gradation of D.A.H. symptoms from none to moderate severity. They did not, however, except in a very few cases, show by any means such an extreme degree of severity of symptoms as was common among patients admitted directly in consequence of the effects of irritant gas.

An attempt was made to classify the cases observed under three heads: (1) Those with marked D.A.H. symptoms, (2) those with definite D.A.H. symptoms, and (3) those with no appreciable D.A.H.

Table I gives a selection of representative results of this classification.

TABLE I.

	Pulse at Rest.	Pulse after Work.	Time (min.) for Pulse to Return.	Complaint of Dyspnœa.	Respns. without Valves.	Respns. with Valves.	Respn. during Work.	Holds breath, Inspn. (secs.).	Holds breath Expn.	Vital Capacity, Litres.
Marked D.A.H....	88	136	2+	No	35	48	48	7	5	2.7
	80	176	7+	Yes	32	32	62	25	15	3.5
Definite D.A.H....	96	124	1	Yes	15	15	28	20	15	3.5
	84	100	4+	No	22	20	30	55	25	3.0
No appreciable D.A.H.	58	72	½	Yes	22	27	29	43	18	4.0
	60	88	2	No	13	26	22	54	33	3.2

On examining the figures for the whole series of cases it is evident that in the several degrees of D.A.H. the regulation of the pulse and respiration are both upset, but that in the milder cases the symptoms may be manifested chiefly with respect either to the pulse or respiration.

This is shown in Table II, where two cases of mild D.A.H. are compared.

TABLE II.

No. of Case.	Pulse at Rest.	Pulse after Work.	Time (min.) of Return of Pulse.	Complaint of Dyspnœa.	Respns. without Valves.	Respns. with Valves.	Respns. at Work.	Holds breath, Inspn. (secs.).	Holds breath, Expn.	Vital Capacity, Litres.
97	72	116	3+	No	18	18	22	42	25	2.7
39	72	84	1	No	25	21	29	19	18	3.2

Table III gives a summary of the results, and in addition shows the relation of previous infection and gas poisoning to the frequency of D.A.H. symptoms.

TABLE III.

	No. of Cases.	Gas and/or Infection.	No Gas or Infection.
Definite symptoms of D.A.H. ...	13	12	1
Less marked symptoms	57	37	20
No appreciable D A.H.	30	14	16

It appears from this table that of the 13 cases which showed well defined symptoms of D.A.H., 12, or 92.3 per cent., gave a history of gas poisoning or infection, either recent or from which the symptoms dated; of the 57 cases with ill defined symptoms, 37, or 64.9 per cent., and of the 30 cases free from D.A.H. symptoms, 14, or 46.6 per cent., gave this history.

These results accord well with the findings of Lewis and his co-workers.[4] In considering them it should be borne in mind that several of the cases with no appreciable D.A.H. which are shown as having suffered from gas or infection gave a history of very slight gassing. Also in this connexion it should not be forgotten that the patients examined had been under treatment for very varying periods. Hence the figure of 46.6 per cent. may be taken as a maximum.

A certain number of the patients definitely attributed the onset of their nervous symptoms to some infective illness. It therefore appeared to be desirable to endeavour to find out if there was any causal relation between the effects of gas poisoning and infections, and the onset of symptoms of neurasthenia. With this objective in view the whole series of cases were analysed with a view to separating those who had recently been gassed or suffered from some infection previous to the onset of nervous symptoms from those in whom there was apparently no antecedent infection or gassing which could be related to the neurasthenia.

The result was as follows: Of the 100 cases, 52 gave a history of recent gassing or infection previous to the onset of neurasthenia, 48 gave no such history. The nervous symptoms were so diverse in character, and it is so impracticable to estimate them quantitatively, that it was not possible to classify the patients in order of severity of their symptoms, so that a table comparable to Table III cannot be given.

As stated above, the circulatory and respiratory mechanisms are not necessarily proportionately affected in mild cases of D.A.H., and with a view to obtaining further information in this connexion we have examined the condition of other reflexes in these neurasthenic patients. In making this attempt we were faced by the obvious difficulty that reflex responses cannot be estimated quantitatively. One has therefore to depend on some such arbitrary classification as brisk and sluggish or increased and normal.

On examining the clinical notes of the whole series of cases, it appeared that on the whole there was a tendency for the patients to show some exaggeration of the tendon reflexes, abdominal reflexes, etc. Tremor of hands and tongue was also frequently present. With regard, however, to both tremors and tendon reflexes, it was not possible to classify the patients into groups corresponding to the headings of Table III. There did not appear to be any relation between the severity of D.A.H. symptoms and the frequency of occurrence of exaggerated reflexes. Similarly, no relation could be observed between exaggerated reflexes and a history of recent gassing or infection.

With regard to tremors, however, it was evident that this symptom is more severe in cases showing well marked D.A.H. symptoms than in those who do not suffer in this way.

In view of the functional symptoms so frequently found in patients suffering from D.A.H. as a result of irritant gas poisoning, it was thought advisable to try to obtain some information as to the possibility of the upset of the Hering-Breuer reflex in these patients being of functional origin. An attempt in this direction was made at Taplow.

One of the gassed patients who showed the symptom of rapid shallow breathing to an extreme degree was hypnotized, and while in the hypnotic state was told to breathe slowly and deeply. In response he somewhat increased the depth of his respirations, but the rate remained quite unaltered. Consequently, when the experiment was terminated after a few minutes, he showed indications of over-ventilation. Immediately after he was roused from the hypnotic state the breathing became as shallow as before. The rate remained uninfluenced throughout. Since in this preliminary experiment there was no certainty as to the degree of hypnosis obtained, a second attempt to influence the rapid shallow breathing by hypnotic suggestion was made at the Ashhurst War Hospital.

The patient (Pensr. W.) joined the army in 1914, having previously always had good health. He gave a history of gradual onset of nervousness and of dysentery in France. Never gassed.

On admission his respirations were rapid and shallow, varying between about 40 and 53 per minute. His pulse rate also varied from about 80 to 120.

Hypnotic treatment was tried as follows:

January 3rd. First hypnosis: Not asleep; respirations 44 per minute.

January 5th. Second hypnosis: Slightly deeper; respirations 44 per minute.

January 8th. Third hypnosis: Relaxes well; respirations 44, varying slightly and going up to 46 just before he wakes spontaneously.

January 9th. Fourth hypnosis: Respirations 36, sitting quiet; 34 after three minutes.

January 11th. Fifth hypnosis: Seems to go fairly deep; feels warm glow in abdomen; cannot lift hand; respirations remain at 36 per minute, in spite of suggestion; respirations almost entirely costal.

Hypnotic treatment was then suspended for a time, and during the next few months he improved somewhat on the whole with rest, graduated exercise, and occasionally oxygen at night.

In May hypnosis was again tried by another medical officer daily for about a week. Respirations in waking state varied between 30 and 40 per minute. Under light hypnosis they could be reduced to 24, and on one occasion to 20 for about a minute, becoming more abdominal in character. The respirations would remain at about 25 per minute as long as he remained recumbent and relaxed, but returned to 30 to 40 as soon as he sat up.

Conclusions.

1. Of 100 patients admitted for "neurasthenia" 13 showed well marked symptoms of D.A.H., and 57 had the same condition in lesser degree.

2. The evidence available does not show the same causal relation between previous infection or gassing and "neurasthenia" as holds in the case of D.A.H.

3. No definite relation could be traced between the abnormal Hering-Breuer reflex of D.A.H. patients and the altered tendon reflexes of neurasthenia.

4. Attempts to control the Hering-Breuer mechanism by hypnotic suggestion were only partially successful. The respiration could be slowed for a short time while the patient was relaxed, but no permanent effect could be obtained.

We are indebted to the medical officers of the Ashhurst War Hospital for the clinical notes of the patients, and in particular to Major W. McDougall, F.R.S., who also carried out the first hypnotic treatment in the case of Pensioner W. We are also indebted to the Medical Research Committee for much help, and also to the British and Australian army authorities. To all these we wish to express our thanks.

References.

[1] Haldane, Meakins, and Priestley: Reports of Chemical Warfare Medical Committee, Nos. 5 and 11. [2] Breuer: *Stzngsb. d. Wien. Akad. math. nat.*, Kl. 2, Abt. 58, 5909, 1868. [3] Haldane and Mavrogordato: *Journ. Physiol.*, 50, Proc. Physiol. Soc., p. xli. [4] Lewis: Medical Research Committee, Special Report Series No. 8, 1917.

TWO CASES OF PNEUMO-BACILLARY MENINGITIS OF BACTERIOLOGICAL INTEREST.

BY

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The following is an account of a bacteriological and pathological investigation of two cases of meningitis which occurred in No. — General Hospital, E.E.F., during 1917; they presented features of unusual interest, for the reason that the organism isolated from the first case closely resembled *B. pestis*, and in the second case the clinical aspects were so closely allied to those seen in cerebro-spinal meningitis that until the *B. pneumoniae* was isolated from the cerebro-spinal fluid the case was considered to be one of meningococcal infection.

Case I.

Pte. X. was admitted to hospital suffering from an enlarged, hard, and painful gland in the posterior triangle of the neck; his temperature on admission was 102° F., and his mental condition was sluggish. In a short time (about one week) marked drowsiness supervened, and this passed on to coma, from which he did not recover. Shortly after admission the gland in the neck was incised; a sterile swab was passed deeply into the wound and sent in for bacteriological investigation. No obvious collection of pus was found upon incision.

An agar culture was made, and after forty-eight hours at 30° C. opaque, greyish-white shining colonies had appeared; a Gram preparation made from these colonies showed: (1) Cocco-bacilli, a few of them showing bipolar staining with fuchsin, and occurring at times in pairs. (2) Rod and filament forms. Both of these were negative to Gram staining. A guinea-pig inoculated with the culture died after six days; films made from the spleen (which showed, naked eye, numerous yellowish-white areas) and inguinal glands showed large numbers of cocco-bacilli, many of which showed definite bipolar staining with fuchsin or Loeffler's methylene blue.

Cerebro-spinal fluid from this patient was cultured upon agar and serum-agar at 30° C., and colonies similar to those obtained from the gland juice had grown after thirty-six hours; films made from these colonies showed Gram-negative cocco-bacilli and filament forms, with occasional bipolar staining in the former. The sugar reactions of a pure subculture gave glucose (ac.), lactose (ac.), mannite (ac.), no gas being formed in any. Gelatin was not liquefied, and upon potato the organism grew well.

At the end of the third week the patient died, the *post-mortem* findings being as follows: (1) Purulent exudate at base of brain:

(2) normal spleen; (3) other organs apparently no naked-eye change.

A rat was inoculated with pus from the base of the brain, and died after fourteen days; films made from the spleen and inguinal glands showed cocco-bacilli morphologically identical with those found in the guinea-pig. Cultures upon agar and serum agar of the pus from base of brain of the patient showed numerous colonies after twenty-four hours at 30° C., these being shown to be composed of an organism identical with that isolated from the gland in the neck.

In addition to the above investigations cultures were made from the blood of the patient during life and *post mortem* from the heart, but all proved negative for enterica or for septicaemia.

The interesting features about this case were:

1. The morphological similarity of the isolated organism to *B. pestis* (pleomorphism, bipolar staining). The cocco-bacilli seen in the smears of the guinea-pig's spleen and in those from the rat might possibly have been confused with *B. pseudotuberculosis rodentium*, but the animals were shown to be quite healthy before inoculation.

2. The meningococcus may at times assume a somewhat variable morphology, but the presence of bipolar staining and filament forms is unusual.

3. After about three subcultures upon agar the character of bipolar staining had disappeared, there being only deeply staining cocco-bacilli, occurring for the most part in pairs.

Finally, sugar reactions of a pure subculture corresponded in all respects with those given by *B. pneumoniae*—that is, a complete fermentation (AC + G) with all the ordinary sugars.

Clinically the case was unlike one of bubonic plague; the duration of the illness and the fact that the cervical glands are rarely affected (about 5 per cent. of all cases and then generally in children),[1] also the rarity of meningitis as a complication, all tended to negative the diagnosis of plague.

Cases of "larval plague" might possibly simulate such a case, but these are uncommon except when occurring during an epidemic.

B. pneumoniae varies somewhat in its cultural and morphological characters, according to the body medium in which it is growing—in this case a gland, and finally the cerebro-spinal fluid; bipolar staining is stated to be a fairly common variation in cases where the organism is passed through a guinea-pig or rat, and is a point which should be borne in mind.

CASE II.

Pte. Y. was admitted to hospital with clinical signs and symptoms pointing to a meningitis. No enlarged cervical glands were found and Kernig's sign was absent. A specimen of cerebro-spinal fluid was sent for cytological and bacteriological examination but gave entirely negative results, this specimen being quite clear and yielding upon centrifugalization only a few mononuclear leucocytes. A second specimen of cerebro-spinal fluid was sent next day, and this time was opaque, a film from the centrifugalized deposit showing polymorphs in large numbers and a few coccoid and cocco-bacillary organisms which were Gram-negative as to staining. A culture of this deposit (pus) on Loeffler's serum gave, after twenty-four hours at 37° C., numerous opaque greyish-white shining colonies which proved to be composed of Gram-negative cocco-bacilli, occurring for the most part in pairs. The sugar reactions were as follows: Glucose, AC+G; lactose, AC+G; mannite, AC+G; saccharose, AC+G; dulcite, AC+G; thus definitely showing that typical *B. pneumoniae* was the infecting organism. This strain grew well and rapidly upon agar at 37° C., and cultures showed a certain amount of pleomorphism.

This patient made a good recovery.

The author's thanks are due to Major Ferguson, R.A.M.C., Director of the Military Bacteriological Laboratory, E.E.F., for his assistance in carrying out the animal inoculations, etc., in connexion with Case I, and to Captain Campbell, R.A.M.C., of the same laboratory, for performing the *post-mortem* examination in the author's absence.

REFERENCE.

[1] Stitt, *Tropical Diseases.*

OF four hundred Serbian doctors in practice before the war, it is stated that in August fewer than one hundred were left.

THE Paris Neurological Society is organizing an annual meeting which neurologists and psychiatrists of various countries will be invited to attend. The first will be held in Paris in July, 1921, and will extend over two days. The question proposed for debate is the clinical forms and the treatment of syphilis of the nervous system.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

RADICAL CURE OF FEMORAL HERNIA BY THE INGUINAL ROUTE.

AN operation for radical cure of femoral hernia I have performed for several years past has given perfect satisfaction and can be thoroughly relied on, provided there is asepsis. The method has been described in the American Journal, *Surgery, Gynecology, and Obstetrics*, September, 1918. The idea is to produce a closure on the ball valve principle.

The Operation.

Make a sufficient incision just below and parallel to Poupart's ligament. Expose the sac and its coverings. By gauze dissection free the sac and its coverings up to the femoral canal. Pulling on the sac, with a blunt dissector separate the attachments in the femoral canal. Open the sac and split it well up to the ring. Free adherent omentum and reduce the contents if possible. Now dissect up skin and fascia well above Poupart's ligament and incise the external oblique aponeurosis a quarter to half an inch above Poupart's ligament and parallel to it. Retract the cord or round ligament inwards. Incise the transversalis fascia from the spine of the pubes upwards and outwards, parallel to Poupart's ligament. Curved artery forceps are now passed up from the thigh through the femoral ring, *external* to the sac and coverings, to the abdominal aspect, and there the points of the forceps are exposed in order to see that the way is free and that there is sufficient room. From above, curved artery forceps are now passed downwards on to the thigh, and one half of the sac and its coverings are seized and pulled upwards to the abdominal aspect, and then the other half is made to follow suit. Examine the opening and free any further adhesions if present. Carefully, with needle and catgut, suture the neck of the sac high up, leaving the distal part intact. Now with needle and catgut stitch the sac and its coverings, till it assumes the shape of a ball, about half as big again as the abdominal aspect of the femoral ring. This size can be gauged with the finger. Finally, leave two long ends of this last piece of catgut at the distal portion of the ball. Curved forceps are now passed upwards from the thigh, through the canal, and the two terminal ends of catgut are seized and pulled downwards through the femoral canal on to the thigh. Gently pull these two ends of catgut till the ball of sac has been well wedged down beneath the transversalis fascia, which thoroughly blocks the opening at the abdominal aspect of the femoral ring. Thread one of the catgut ends on a needle, and this needle takes up a portion of the pectineal fascia, then the needle is withdrawn and the two ends tied together, thus steadying the ball valve of sac on the abdominal aspect of the femoral ring. The result is obvious that the more the patient strains the firmer the closure. Suture divided structures.

Patients can be guaranteed a cure, and can be got out of bed in a week. One of my last patients was a gentleman of about 70, whose hernia was strangulated, and he was home and walking about in a fortnight. The operation is a little tricky, and is best carried out by a surgeon of experience.

Edinburgh. J. W. DOWDEN.

POLYCYTHAEMIA IN MITRAL DISEASE.

IN April of this year a Chinese girl, 16½ years of age, was admitted to the Victoria Hospital, Hong Kong, under my care, complaining of great dyspnoea and distress on the slightest exertion. She had fainted several times lately. Both the girl and her mother were of the uneducated class, and a history was difficult to elicit, but it appeared that although the condition had existed for some years it did not date back to early childhood. The girl was slightly built, her breasts were quite undeveloped, and she had never menstruated.

The heart's apex beat was somewhat heaving and diffuse, and 4½ in. to the left of the mid line in the fifth intercostal space. The right border of the heart extended ½ in. beyond the right border of the sternum. There was a marked presystolic thrill and definite presystolic and systolic bruits at the apex; the latter conducted into the axilla. The second sound at the pulmonary base was much accentuated, and after any slight exertion a very soft, blowing, mid-diastolic murmur could be heard at the pulmonary base, conducted down the left border of the sternum. This apparently was due to a certain degree of incompetence of the pulmonary valve, induced by long-standing high pressure in the pulmonary circuit, secondary to the damaged mitral valve. No signs of congenital abnormality could be made out. There was a slight cough throughout, with a few crepitations at the bases of both

lungs. There was no enlargement of spleen or liver, and the urine was normal.

There was at no time any cyanosis; the girl always looked pale and her conjunctivae were almost blanched. Her fingers were long and tapering and there was no trace of clubbing. The blood count was, therefore, surprising:

Red blood corpuscles	... 7,600,000
White blood corpuscles	... 8,200
Haemoglobin	... 90 per cent.
Colour index	... 0.6

The girl remained in hospital for six weeks, and with good food, rest, and digitalis her condition improved considerably. Two further blood examinations were made, the figures on both occasions agreeing closely with the first count.

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BEZOLD'S MASTOIDITIS WITHOUT HISTORY OF AURAL SUPPURATION.

C. F., aged 32, was referred to me by her physician, Dr. John Halahan. She was complaining of a severe headache which had been almost continuous for two or three days. Dr. Halahan, in the absence of any indication of aural trouble, and having exhausted other possible causes in his investigation, nevertheless suspected the mastoid as the source of trouble.

I learnt that the headaches had occurred at intervals in the last two and a half years, lasting some days and disappearing; there had been no discharge at any time from the ear; she had had measles in childhood. There was a perforation in the anterior and posterior inferior quadrants of the tympanum. The tympanic cavity contained a clear secretion. I was struck by the extreme sensibility of the posterior wall of the aural canal, out of all proportion to the small amount of inflammatory reaction. Pressure over the antrum and point of the mastoid caused pain.

In consultation with the physician we resolved on a radical operation, to which the patient objected. I saw her again five days later. The headache was very severe, the temperature was 38.5° C. in the axilla, and there were other symptoms of general infection. The aural canal was dry, but, as before, there was clear secretion in the tympanic cavity. The point of the apophysis was very tender, and there was marked tumefaction of the tissues of the neck—in short, an undoubted perforation of the inner surface of the apophysis.

I operated on the same day, making the usual retro-aural incision, and extending it below over the sterno-cleido-mastoid. Deepening the incision in the neck I found multiple small abscesses and a large one internal to the muscle. The region around the antrum was very eburnated and contained caseous material, whilst that of the point of the mastoid consisted of large cells containing thick pus.

After removal of the diseased bone and the extirpation of the apophysis of the mastoid, I made a plastic flap and closed the post-aural incision completely. Drainage of the lower incision with iodoform gauze and tamponing through the aural canal completed the operation.

The patient complained of headache for three days afterwards, but in five weeks made an uninterrupted recovery.

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ACUTE YELLOW "ATROPHY" DURING PREGNANCY TREATED BY CAESAREAN SECTION.

Mrs. B., aged 42, was admitted to the Oldham Union Infirmary on the evening of May 1st, 1919. She was seven and a half months pregnant, and had had four previous normal confinements, the last being twelve years ago. She had been vomiting for a fortnight. She was profoundly collapsed, constantly retching, and vomiting faecal, blood-stained material. She was deeply jaundiced, the tongue was dry and brown, the pulse feeble, and the temperature subnormal. There was tenderness of the liver and spleen, and the area of liver dullness was much diminished. The os uteri was not absorbed and the cervix was rigid. The urine contained a large amount of albumin, and crystals of leucin were found on microscopic examination. The mental condition of the patient was strange, and her conversation quite incoherent.

It was decided to evacuate the uterus as rapidly as possible, and Caesarean section, under ether, was performed by Dr. Frank Radcliffe, the visiting surgeon. The anaesthesia was as light as was consistent with safety. The fetus was found to have been dead some time, but the placenta, membranes, and endometrium were normal; the liver was tucked away under the ribs and was yellowish. At the conclusion of the operation the patient's pulse was 68, and the temperature 97.4°; she was very collapsed. She was put on rectal salines of glucose and sodium bicarbonate, and a mixture containing tincture of iodine (one minim) was administered hourly.

Vomiting ceased from the time of operation and the patient's recovery was rapid. She was almost ready for discharge, the wound having healed perfectly, when she had a sudden attack of dyspnoea and died in a few minutes, fifteen days after operation.

Post-mortem examination showed death to be due to pulmonary embolism. There was yellow mottling of the liver, which was soft and friable, and enlarged, its weight being 61 oz. The kidneys and spleen were congested. The heart was normal.

In the literature at my disposal I cannot find any reference to the treatment of this condition by Caesarean section, but the rapidity and safety by which delivery in this way could be effected were the deciding factors in the choice of treatment. I wish to thank Dr. R. P. Parker, the Superintendent Medical Officer, for permission to record this case.

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Reviews.

SURGERY OF THE LUNG AND PLEURA.

DURING the present century a great deal of attention has been paid to the surgery of the lungs and pleura, of late particularly so in the case of gunshot wounds of all sorts. These of course have received treatment for the most part near the battle front, or at any rate within fifty miles of the spot where they were sustained. Since the year 1916 both French and English army surgeons have done a vast amount of work illuminating the subject, and an excellent account of the present position of the treatment of wounds of the lung and pleura is furnished in Mr. FAGGE'S translation of Professor GRÉGOIRE and Dr. COURCOUX'S French book[1] on the subject. This is divided into three parts, the first dealing with aseptic wounds of these tissues, the second with infected wounds, the third with the late sequelae of such wounds in general. It is not possible to summarize the conclusions reached by these authors or their translator, nor the evidence upon which they are based. It may be said that the expectant line of treatment generally adopted in the first half of the recent war was replaced in its second half by more active and ambitious forms of surgical interference—applied early in the severer cases, without much delay in those of intermediate type, and held in readiness for the milder cases. As Professor Duval put it, "every chest wound of serious aspect should be operated on"; and Mr. Fagge adds that effusions of blood into the pleura should be evacuated without undue delay by aspiration. The book is well written, and has been admirably translated; its subject matter is really part of the surgery of war, but much of it is applicable to cases of injury that are not rare even in times of peace.

The more ambitious and much more expensive volume on the *Surgery of the Lung and Pleura*,[2] by Mr. MORRISTON DAVIES, gives a detailed account of the whole subject, based mainly on the author's own experience in this branch of surgery; it is designed for the use of surgeons. Beginning with a chapter on anatomy, in which the bases

[1] *Wounds of the Pleura and of the Lung.* By R. Grégoire, Professor of the Faculty of Medicine, Paris, and A. Courcoux, Physician to the Hospitals of Paris. Translated and edited by C. H. Fagge, F.R.C.S. London: University of London Press, Ltd.; Paris: Masson et Cie. 1919. (Cr. 8vo, pp. xxiii, 222; 44 figures. 7s. 6d. net.)

[2] *Surgery of the Lung and Pleura.* By H. Morriston Davies, M.A., M.D., M.C., F.R.C.S., Hon. Captain R.A.M.C.(T.). London: Shaw and Sons. 1919. (Cr. 4to, pp. xxiv + 260; 80 figures. 25s. net, postage 6d. extra.)

of the two lungs are figured as extending equally low on the two sides behind (Fig. 9), a relation that is surely unusual, the author next discusses intrapleural pressures, the diagnosis and prognosis in pulmonary disease, diseases of the pleura, and injuries of the lungs and pleura. The rest of the volume is given to chapters on various affections of the bronchi and lungs, the longest dealing with pulmonary tuberculosis. The book is admirably illustrated, and most of the many reproductions of skiagrams it contains are very good. The author has had a large experience in the surgery of the lungs and pleura, and his very general exclusion of the work of other writers from the book has the advantage of unifying the volume and increasing the personal appeal it makes to the reader. But so much surgery of the lung has been performed in Scandinavia, for example, and so much artificial pneumothorax treatment for pulmonary tuberculosis, not to mention such by-products as Jacobaeus's method of dividing pleural adhesions by the actual cautery, that the reader may, perhaps, feel a little disappointed to find no mention of such work in Mr. Davies's extensive and very practical volume. Cases of pulmonary and pleural disease still fall mainly to the lot of the physician, and are passed on to the surgeon on the basis of the physician's interpretation of the symptoms and physical signs presented by the patient. It is for this reason that the collaboration of a physician and a surgeon found such a happy expression in the publication of Fowler and Godlee's classical textbook at the end of last century; it is possible that both the author and his readers have lost something through the lack of some such collaboration in the production of Mr. Davies's valuable monograph.

A complete contrast to the method of composition adopted by Mr. Morriston Davies is afforded by Professor RICKETTS'S collection of papers on the *Surgery of the Thorax and its Viscera*.[3] Here the references to the literature of the subjects discussed may be counted by hundreds, and the text deals far more with the opinions and experiences of the authors quoted than with the observations made by Professor Ricketts himself. It is apparent that he must be an unusually attentive student of the literature of the subject in all its branches; thus, in his chapter on the surgery of the lymphatic glands and channels, he gives references to such topics as the development of the thoracic duct in the turtle. He does not, however, seem to mention in his text the treatment of fat embolism by establishing a temporary fistula of this duct in the neck, as advocated and practised by Wilms. The book consists of nineteen chapters, or reprinted lectures and addresses, dealing with the surgery of the thorax and the various viscera and structures it contains. It is full of useful information, and should form highly suggestive and instructive reading for surgeons interested in the many topics with which it deals.

ENGLISH PUBLIC HEALTH.

THE war brought home to the nation the fact that its greatest wealth consists in the health and well-being of the individuals composing it, and that the vast amount of physical and mental deterioration brought to light by recruiting medical officers must be arrested if our country is to keep its place in the van of the great peoples of the earth.

The appearance of the English Public Health Series is timely, and should help to educate and form a sound public opinion on all matters affecting the country's hygienic and sanitary requirements. The success of a Ministry of Health will in the end largely rest with the people themselves, and for their education this series should prove invaluable. The series is so planned as to appeal to the general reader as well as to the great body of professional and voluntary workers in the domain of public health. It is under the editorship of Sir MALCOLM MORRIS, and the introductory volume, which relates *The Story of English Public Health*,[4] is from the able pen of the editor. The scope of the first volume can be inferred from the titles of the chapters composing the work. They are: The "New Humanity," "The Nation's First Health Charter," "The Era of Inquiry and Education," "The Local Government Board," "Other Central Health Authorities," "Local Health Authorities," "Bacteriology," "The Crusade against Venereal Disease," "The Ministry of Health."

With his introductory volume Sir Malcolm Morris supplies a history in concise form of the evolution of State medicine from the times of Mead and Howard up to its latest phase—the establishment of a Ministry of Health. This little book will stimulate the advanced student to consult the works of Sir John Simon and Bannington, and will give the general reader an idea of the growth and development of our sanitary institutions. It gives a good idea of how much we owe to the enthusiasm of social workers and voluntary health associations as well as to official departments.

Sir Malcolm Morris's racy style and vivid presentation of the facts will grip the reader's attention from beginning to end. The introductory volume of the series gives a clear outline of what has been accomplished during the past three-quarters of a century, and holds out hope of a brighter future.

BUCHANAN'S MANUAL OF ANATOMY.

BUCHANAN'S *Anatomy*[5] has now passed into a fourth edition, and may be said to have established itself as one of the standard British textbooks on the subject. It contains over seventeen hundred pages, and may be fairly credited with containing all the facts of the science any candidate for an examination or any general practitioner of medicine is ever likely to require. Despite its size it is the smallest of the standard textbooks—a no inconsiderable merit in these days of increasing demands on the student's time by teachers of other subjects. The book differs from other books of its class in that the subject matter is arranged topographically instead of systemically, in that there is included after the description of each region a guide to the dissection of the region, and finally in that the "old" nomenclature has been retained, a procedure in accordance with the views of the members of the Anatomical Society of Great Britain and Ireland as expressed at a recent meeting.

All the above features have much to commend them. If it be granted, as we think it must be, that a student can best pursue the study of anatomy in the dissecting-room, where he must perforce adopt the topographical method, it seems only rational to counsel him, when revising his knowledge of the subject in his study, to follow the lines along which he originally proceeded. The inclusion of the "guide to the dissection" has also the effect of enabling the student to revive more readily his memory of the actual dissection. On the other hand, the alternative systemic arrangement gives the student a complete account of each system, and consequently facilitates reference. Each arrangement has its advocates and no doubt its merits. The method of the present reviewer in acquiring as a student his knowledge of the subject was, apart from osteology and embryology, to study the subject topographically, and he has never seen any reason to regret the course or to advise a student to take any other.

As to the subject matter, the facts of anatomy as distinct from the theories are now so determinate that one textbook must be very much as another. The only difference that remains possible is in the illustrations, and in the way in which the facts are applied to clinical medicine and surgery. In this volume the publishers have had access to so many English and foreign publications, and the author and editors have shown so wise a discrimination in their selection, particularly in following the *via media* between schematicism and realism, that the illustrations may be said to form one of the most successful and attractive features of the book.

As to the application of anatomy to medicine and surgery, we venture to think that more might be done in this direction; and now that, as we understand from the preface, future editions will be edited by London teachers of anatomy, we hope that a serious attempt will be made to make the work still better adapted to the needs of students, the vast majority of whom will become medical

[3] *Surgery of the Thorax and its Viscera: Symptoms, Diagnosis, Indications, and Treatment.* By Benjamin Merrill Ricketts, Ph.B., M.D., LL.D., F.A.C.S. Cincinnati: By the Author. 1918. (Demy 8vo; 16 figures.)

[4] *The Story of English Public Health.* By Sir Malcolm Morris, K.C.V.O. English Public Health Series. London: Cassell and Co., Limited. 1919. (Cr. 8vo; pp. xi+166. 5s. net.)

[5] *Manual of Anatomy: Systematic and Practical, including Embryology.* By the late Professor A. M. Buchanan, M.A., M.D. Fourth edition, edited by a Committee of Anatomists in London. London: Baillière, Tindall, and Cox. 1919. (Demy 8vo, pp. xii + 1743; 677 figures. 30s. net.)

practitioners. Even as it is we consider the book is, on the whole, in size, arrangement, and illustrations, better suited for such students than any other book with which we are acquainted.

NOTES ON BOOKS.

Pye's Surgical Handicraft[6] has now reached its eighth edition. Several chapters have been rewritten and new illustrations have been added. The new matter includes an account of Sir Robert Jones's methods of treating orthopaedic cases. The character of the work has in no way been altered, and its well-known standard of excellence is maintained. It has reappeared at an opportune moment. Those members of the profession who left their hospitals without holding a resident appointment and have now returned, can be strongly recommended to read this work before going into practice. The book should always be at hand as a guide to dressers and house-surgeons.

The third edition of Dr. Fleming's *Short Practice of Medicine*[7] provides both the medical student and the practitioner of medicine with a first-rate summary of the subject. It is clearly written, dogmatic (as all textbooks should be), and up to date. The author has retained the old anatomical nomenclature, inserting a short glossary with the equivalents of many of the older names in the so-called international terminology. One may, perhaps, doubt whether his description of the murmur heard in cases of patent ductus arteriosus as "a loud, somewhat late systolic murmur" (page 333) is adequate; the murmur is, surely, continuous throughout systole and diastole, but much louder during systole. There is a general tendency to expand with each successive edition of the shorter textbooks of medicine. Dr. Fleming is to be congratulated on the success with which he has resisted this tendency. The book may be cordially recommended to medical students and practitioners.

The second edition of Miss E. M. Magill's *Notes on Galvanism and Faradism*[8] is intended for the use of masseuses preparing for the examinations in medical electricity now held by the Incorporated Society of Trained Masseuses. It deals only with the elements of the subject, and should be of some service to those for whom it is intended, as it is clearly written and well illustrated. One may doubt whether it is well to describe accumulators as galvanic cells (p. 34); the statement, "It is possible to interpose so great a resistance in a circuit that no ordinary voltage can force a current through it" (p. 36), is misleading; on p. 119, line 2, the words "similar to" should be deleted.

In *The Life of Matter*[9] Dr. Arthur Turnbull has written a general introduction to the subject of life for the general reader. It is based on observation and experiment and endeavours to cover in a short, suggestive, and highly illustrated manner the modern views of science on questions arising in every department of human activity. It is divided into three parts, the first giving some account of matter, the second details of the way in which its properties may be investigated; the third introduces the reader to the applications of science to the problems of life, speaking broadly. Dr. Turnbull has written for the benefit of those who want to learn how to connect modern progress in knowledge with the necessities of daily life. His style is intimate, his pages are replete with facts and explanations that should stimulate thought. The book ought to prove a success in its effort to popularize scientific method and its results.

[6] *Pye's Surgical Handicraft.* A Manual of Surgical Manipulations, Minor Surgery, and other matters connected with the work of House-Surgeons and Surgical Dressers. Edited and largely rewritten by W. H. Clayton-Greene, B.A., M.B., B.C.Camb., F.R.C.S.Eng. Eighth edition, revised. Bristol: John Wright and Sons, Ltd. London: Simpkin, Marshall and Co., Ltd. (Demy 8vo, pp. xvi + 639; 362 figures, 11 plates. 21s. net.)

[7] *A Short Practice of Medicine.* By Robert A. Fleming, M.A., M.D., F.R.C.P.E., F.R.S.E. Third edition. London: J. and A. Churchill. 1919. (Roy. 8vo, pp. xxiii + 675; 64 figures. 21s. net.)

[8] *Notes on Galvanism and Faradism.* By E. M. Magill, M.B., B.S. Lond., D.P.H., R.C.S.I.Hons. Second edition. London: H. K. Lewis and Co., Ltd. 1919. (Cr. 8vo, pp. xvi + 224; 67 figures. 6s. net.)

[9] *The Life of Matter.* An Inquiry and Adventure. Edited by Arthur Turnbull, M.A., B.Sc., M.B.Glasg. London: Williams and Norgate. 1919. (Med. 8vo, pp. 324; 322 figures, 4 coloured plates. 7s. 6d. net.)

An institute of biology and serumtherapy has recently been founded in Madrid. The director is Professor Dr. Gustave Pittaluga y Fattorini, professor of parasitology in the university.

MINISTRY OF HEALTH.

CONSULTATIVE COUNCILS.

The Ministry of Health made the following announcement on September 29th:

When the Ministry of Health Bill was before Parliament, it was made clear that the Ministry when established would seek advice on a variety of subjects within its province from advisory bodies chosen so as to include men and women with full practical knowledge of the questions on which they would be asked to advise. These bodies are called in the Act Consultative Councils, and their constitution and functions will be found in the Order in Council of August 18th, 1919. In the case of England they will be four in number, and will consist of the Consultative Council on Medical and Allied Services, the Consultative Council on National Health Insurance, the Consultative Council on Local Health Administration, and the Consultative Council on General Health Questions. The secretary will be Mr. Michael Heseltine, C.B., Ministry of Health, Whitehall, S.W.1. The councils will consist of twenty members each, including a chairman and vice-chairman, but they may for special purposes appoint committees on which other persons may be co-opted, so that particular problems will be considered with the help of those who have made them a special study.

The membership of the Consultative Council on General Health Questions, which will also be twenty in number, is not yet completely settled, but at least half of its members will be women.

Consultative Council on Medical and Allied Services.

To this Council will be referred such problems as the national development and extension of medical, nursing, and midwifery work, and it is proposed that for some purposes it should, in accordance with the arrangement outlined above, act through committees more specialized than the Council itself. Its members have been chosen from the fields of specialist medicine and surgery, general practice both private and insurance, the public health services, the work of women in medicine (particularly the care of mothers and infants), hospital administration, and the application of other branches of science to medicine.

It is intended that when questions are under consideration that specially affect the nursing and midwifery services of the country the Council should be assisted by the appointment of a committee consisting partly of its own members, but also including practising nurses and midwives and other persons, not members of the Council, who have devoted themselves specially to the study of nursing and midwifery questions.

The Council will consist of the following:

Chairman: Sir Bertrand Dawson, G.C.V.O., C.B., M.D., F.R.C.P.,
Physician to the London Hospital; Dean of the Faculty of Medicine, University of London.

Vice-Chairman: Colonel C. J. Bond, C.M.G., F.R.C.S., F.L.S.,
Honorary Consulting Surgeon to the Leicester Infirmary; Member of the Medical Research Committee of the Ministry of Health.

Norman G. Bennett, Esq., M.A., M.B., B.Ch., L.D.S.Eng.,
Dental Surgeon to the Royal Dental Hospital and to St. George's Hospital, London; Chairman of the Representative Board of the British Dental Association.

R. A. Bolam, Esq., M.D., B.S., M.R.C.P.,
Honorary Physician to the Skin Department, Royal Victoria Infirmary, Newcastle-on-Tyne; Professor of Medical Jurisprudence in the University of Durham.

Victor Bonney, Esq., M.D., B.Sc., M.S., F.R.C.S.,
Assistant Obstetric and Gynaecological Surgeon to the Middlesex Hospital; Surgeon to the Chelsea Hospital for Women.

T. Eustace Hill, Esq., O.B.E., M.B., C.M., B.Sc.,
Medical Officer of Health and School Medical Officer for the County of Durham; Medical Adviser to the Durham Insurance Committee; Professor of Hygiene and Public Health in the University of Durham.

F. Gowland Hopkins, Esq., M.A., D.Sc., F.R.S., F.R.C.P.,
Professor of Biochemistry in the University of Cambridge; Official Analyst to the Home Office; Representative for Cambridge University on the General Medical Council; Member of the Medical Research Committee of the Ministry of Health.

Miss M. H. F. Ivens, M.B., M.S.,
Honorary Medical Officer for Diseases of Women to the Stanley Hospital, and Honorary Surgeon to the Samaritan Hospital, Liverpool; former President of the Northern Association of Medical Women.

Miss JANET E. LANE-CLAYPON, M.D., B.S., B.Sc.,
Dean and Lecturer on Hygiene of the King's College for Women, London.

A. LINNELL, Esq., M.R.C.S.,
Chairman of the Insurance Committee and Secretary of the Panel Committee for Northamptonshire.

H. G. DAIN, Esq., M.B., M.R.C.S., L.R.C.P.,
Chairman of the Insurance Committee and Chairman of the Panel Committee of the City of Birmingham.

A. FULTON, Esq., M.B., B.Ch.,
Vice-Chairman of the City of Nottingham Health Committee; Chairman of the Nottingham Insurance Committee.

Sir WILLIAM S. GLYN-JONES,
Secretary and Registrar of the Pharmaceutical Society of Great Britain; Alderman of the Middlesex County Council; formerly Chairman of the Middlesex Insurance Committee.

T. A. GOODFELLOW, Esq., M.D., B.Sc., M.R.C.S., L.R.C.P.,
Member of the Insurance Committee for the City of Manchester; Chairman of the Manchester Local Medical and Panel Committees.

G. E. HASLIP, Esq., M.D., D.P.H., M.R.C.S., L.R.C.P.,
Treasurer of the British Medical Association, and former President of the Metropolitan Counties Branch of the Association.

J. A. MACDONALD, Esq., M.D., LL.D., M.Ch.,
Honorary Physician to the Taunton and Somerset Hospital; direct Medical Representative for England on the General Medical Council; Chairman of Council of the British Medical Association.

R. W. MORRIS, Esq.,
Secretary of the London Hospital, Whitechapel, E.

JOHN ROBERTSON, Esq., C.M.G., O.B.E., M.D., M.B., B.Sc.,
Medical Officer of Health for the City of Birmingham, former President of the Society of Medical Officers of Health.

T. W. SHORE, Esq., M.D., M.R.C.S., L.R.C.P., B.Sc.,
Dean of the Medical School and Lecturer on Comparative Anatomy and Biology to St. Bartholomew's Hospital.

Sir WILLIAM A. TILDEN, D.Sc., F.R.S., LL.D.,
Emeritus Professor in the Imperial College of Science and Technology, formerly Dean and Professor of Chemistry of the Royal College of Science, London.

CONSULTATIVE COUNCIL ON NATIONAL HEALTH INSURANCE.

This Council will, as its name indicates, consider problems of approved societies' work arising in the administration of the cash benefits (sickness, disablement, and maternity) by approved societies under the Insurance Acts. Its membership includes persons familiar with the work of all the principal types of approved societies, and is as follows:

Chairman: T. NEILL, Esq., J.P.,
Chairman of the National Amalgamated Approved Society.

Vice-Chairman: The Rev. Canon F. C. DAVIES,
Past Grand Master of the Manchester Unity; President-elect of the National Conference of Friendly Societies.

FRANCIS ASKEW, Esq., J.P.,
Secretary of the United Ancient Order of Druids; Past President of the National Conference of Friendly Societies.

J. BADLAY, Esq.,
Royal Liver Friendly Society.

F. W. DANIELS, Esq.,
Secretary of the Ideal Benefit Society.

JAMES DEVONSHIRE, Esq.,
Managing Director of Metropolitan Electric Tramways, London, and Suburban Traction Co., London United Tramways.

GEORGE DEW, Esq., J.P.,
Past Chairman of the Hearts of Oak Benefit Society; Parliamentary Agent for the National Conference of Friendly Societies.

A. P. DIXON, Esq.,
Secretary of the Eastern Counties Approved Societies and of the National Association of Approved Societies for the Eastern Counties.

Miss FLORENCE,
Secretary of the Women Clerks and Secretaries Friendly Society.

A. HENRI, Esq.,
Secretary of the Liverpool Victoria Approved Society.

HENRY LESSER, Esq.,
Secretary of the South Metropolitan Gas Company's Employees' Provident Society and President of the Federation of Employers Approved Society.

Miss MARY R. MACARTHUR,
Secretary of the National Federation of Women Workers.

WILLIAM MARLOW, Esq.,
Secretary of the Ancient Order of Shepherds; Parliamentary Agent for the Ancient Order of Foresters, and Parliamentary Agent and Secretary of the National Conference of Friendly Societies.

R. J. MELLER, Esq.,
Assistant Secretary of the Prudential Approved Societies.

W. F. PURDY, Esq.,
Executive Council of Ship Constructors and Shipwrights' Association.

P. ROCKLIFF, Esq.,
Secretary of the New Tabernacle Approved Society; Secretary of the Joint Committee of Approved Societies.

Councillor J. H. STEELE, J.P.,
President of the National Conference of Friendly Societies, 1918-19; Treasurer, Sons of Temperance Approved Society.

The Right Hon. J. H. THOMAS, M.P.,
Secretary of the National Union of Railwaymen.

C. TUCKFIELD, Esq.,
Secretary of the National Deposit Friendly Society.

G. H. WARNE, Esq.,
Executive of the Northumberland and Durham Miners' Association.

CONSULTATIVE COUNCIL ON LOCAL HEALTH ADMINISTRATION.

This Council will consider the administrative problems arising out of proposals for the development and extension of health services, and its membership has been composed so as to include persons familiar with the work of local authorities of various types, the Insurance Committees, and the Poor Law guardians. The membership of the Council is as follows:

Chairman: Sir W. RYLAND ADKINS, M.P., J.P.,
Vice Chairman, Northamptonshire County Council.

Vice-Chairman: W. T. POSTLETHWAITE, Esq., LL.B., O.B.E.,
Clerk to the Swinton and Pendlebury Urban District Council; Late Chairman of the Executive Council of the Association of Urban District Councils.

E. R. ABBOTT, Esq.,
Clerk to the Middlesex Insurance Committee.

J. R. ANDERTON, Esq.,
Chairman of the Public Health Committee of the London County Council.

FRANCIS BATE, Esq.,
Chairman of the Berkshire Insurance Committee.

Miss BROADBENT,
Member of the Marylebone Board of Guardians; Chairman of the Marylebone Infirmary Committee, and Member of the Metropolitan Asylums Board.

A. B. BRYCESON, Esq.,
Town Clerk of Woolwich.

NEVILLE CHAMBERLAIN, Esq., M.P.,
Late Lord Mayor of Birmingham.

Sir HARCOURT E. CLARE,
Clerk of the Peace for Lancashire and Clerk to the Lancashire County Council.

Sir JAMES CURTIS, K.B.E.,
Clerk to the Guardians of the Birmingham Union.

Mrs. DIMSDALE,
Cambridgeshire County Council.

Sir ROBERT E. FOX,
Town Clerk of Leeds.

Rev. R. V. O. GRAVES, J.P.,
Chairman of the Rural District Council of Maldon (Essex).

W. GILL HODGSON, Esq.,
Clerk to the Liverpool Insurance Committee.

A. J. LEES, Esq.,
Secretary of the Urban and Rural District Councils' Association.

Sir CHARLES LONGMORE, K.C.B.,
Clerk of the Peace; Clerk of the County Council and Clerk to Lieutenancy for Hertfordshire.

Sir WILLIAM MIDDLEBROOK, M.P.,
Late Lord Mayor of Leeds.

Sir DOUGLAS NEWTON, K.B.E.,
Vice-Chairman, Cambridgeshire County Council.

R. B. NICHOLSON, Esq., O.B.E.,
Town Clerk of Lowestoft.

Lieut.-Colonel SEYMOUR WILLIAMS,
Clerk of the Warmley Rural District Council; Chairman of the Executive Council of the Rural District Councils' Association.

WELSH CONSULTATIVE COUNCIL.

In the case of Wales there will be one Council consisting of thirty members. It will give advice and assistance in connexion with such matters as relate to National Health Insurance (approved societies' work), medical and allied services, local health administration, and general health questions in Wales and Monmouthshire. The members of the Council will be as follows:

Chairman: Sir EDGAR R. JONES, K.B.E., M.P.

Vice-Chairman: Sir WALTER P. NICHOLAS,
Clerk to the Rhondda Urban District Council.

Mrs. L. ANDREWS,
Pentre, Rhondda Valley.

Mrs. BREESE,
Member of North Wales Nursing Association.

Miss CROWTHER,
Inspectress under South Wales Nursing Association.

WILLIAM DAVID, Esq., J.P.,
Past High Ruler of the Independent Order of Rechabites.

Miss A. M. DAVIES,
Honorary Secretary of the North Wales Nursing Association.

IDRIS DAVIES, Esq., J.P.,
Secretary of the Breconshire Association of Friendly Societies.

Mrs. F. ROSE DAVIES,
Member of the Aberdare Maternity Committee.

D. W. EVANS, Esq.,
General Director of the Welsh National Memorial Association.

J. Harrison Evans, Esq.,
Divisional Manager of the Pearl Assurance Company.
Leolin Forestier-Walker, Esq., M.P.,
Member of the Monmouthshire County Council.
E. P. Harris, Esq., J.P.,
Member of the Pembrokeshire County Council.
Edward Harris, Esq.,
Clerk to the Swansea Rural District Council.
W. Harris, Esq.,
Secretary of the South Wales Labour Federation.
Lieut.-Colonel D. Hepburn, C.M.G., V.D., M.D., C.M.,
Dean of the Faculty of Medicine, University College, Cardiff.
D. Rocyn Jones, Esq., M.B., C.M., D.P.H.,
County Medical Officer of Monmouthshire.
Hugh Jones, Esq., M.B., C.M., D.P.H.,
Chairman of the Merionethshire Panel Committee.
R. T. Jones, Esq., J.P.,
Secretary of the North Wales Quarrymen's Union.
Lee Joseph, Esq., M.P.S., J.P.,
Past President of the South Wales and Monmouthshire Pharmacists' Association.
F. Llewellyn-Jones, Esq., LL.B.,
Chairman of the Flintshire Insurance Committee.
Lady Ada Mather-Jackson,
Member of the Priory for Wales of the Order of St. John of Jerusalem.
Lieut.-Colonel Ewen J. Maclean, M.D., M.Ch., M.R.C.P.Lond., F.R.S.(Edin.),
Honorary Gynaecologist, King Edward VII's Hospital, Cardiff.
J. W. Morris, Esq.,
Chairman of Merthyr Tydfil Insurance Committee.
E. Ll. Parry-Edwards, M.D., D.P.H.,
County Medical Officer of Carnarvonshire.
Ellis W. Roberts, Esq.,
Member of Carnarvonshire County Council.
Lawson Taylor, Esq.,
Town Clerk of Wrexham.
D. Lleufer Thomas, Esq., M.A.,
Chairman of Welsh Housing and Development Association.
W. E. Thomas, Esq., C.M., M.D., J.P.,
Chairman of Glamorganshire Panel Committee.
D. T. Williams, Esq.,
Ex-Chairman of the Rhymney Urban District Council, and Member of South Wales Miners' Federation.

Mr. Percy E. Watkins, Welsh Board of Health, City Hall, Cardiff, will be the Secretary of the Welsh Consultative Council.

ESTABLISHMENT OF A VENEREAL PREVENTION COMMITTEE.

In January last an Interdepartmental Committee was appointed, with Mr. Waldorf Astor as chairman, to report on the means which could be taken to mitigate the dangers of the dissemination of tropical and other diseases among the civil population from the process of demobilization and the abnormal shifting of population during the restoration of industry to peace conditions. The committee considered that the objects coming within the terms of reference were threefold:

1. To institute inquiry and to make recommendations with a view to preventing the spread of infection on demobilization.
2. To consider and advise as to the co-ordination of the administrative activities of the departments concerned and to render assistance by the interchange of information.
3. To consider whether any special methods of preventing and treating various infective conditions might be required in consequence of demobilization, or of the occurrence from time to time of epidemics or other disturbing factors in the civil community.

The committee first turned its attention to the prophylaxis of venereal disease, and the memorandum of which an account was given in our issue of September 13th (p. 349) was the result of its inquiries. Its conclusions with regard to the distribution of prophylactics before exposure to infection were: that certain drugs, if properly applied, were efficacious, but that if not properly or skilfully applied their efficacy could not be relied upon; that the issue of prophylactic packets tended to give rise to a false sense of security; that the most carefully organized packet system, such as exists in the army, could not produce such a general reduction in incidence as to counteract the disadvantages; and that energy should not be dissipated on measures of doubtful value, but concentrated on wise propaganda and the provision of early, prompt, and skilled treatment. In view of the considerations mentioned and of the administrative and social difficulties involved, the committee considered that "the official application of a packet system to the civil community is neither desirable nor practicable."

The report has led to the publication of the following manifesto:

In view of the White Paper recently presented to the Ministry of Health containing the decision that the official recognition of self-disinfection in civilian venereal disease is "neither desirable nor practicable," we think it urgently necessary, in the interests of the national and racial health, to ask our fellow citizens for the action which the official forces of the nation find themselves unable and unwilling to take.

There are evidently only three possible courses:

(1) To take no action against venereal infection, apart from moral teaching.
(2) Delayed disinfection (early treatment centres).
(3) To teach and provide immediate self-disinfection.

We all agree in rejecting (1).

The White Paper recommends (2), but the provision of centres for delayed disinfection is not and never can be adequate. The London County Council, the greatest urban authority in the country, has rejected the scheme. No method is even suggested that could be worked in rural districts. The practical difficulties in town and country alike are insuperable. Time, the vital factor, is necessarily lost in every case.

There remains only (3), immediate self-disinfection. We maintain that venereal disease is thus preventable; that authoritative teaching on the subject is urgently required; and that the means, together with approved instructions for their use, should be readily accessible to the public.

We fail to recognize any moral distinction between the provision of delayed disinfection at centres and the provision of immediate self-disinfection, and we decline the grave moral responsibility of attempting to conceal the knowledge which is capable of saving myriads of the innocent, living and unborn, from the most hideous disease of body and mind.

We have provisionally formed ourselves into a Venereal Prevention Committee, to whom inquiries may be sent at this address.

Willoughby de Broke (Chairman).
H. Bryan Donkin, M.D., F.R.C.P.
R. Murray Leslie, M.D.
Harvey Littlejohn, F.R.C.S., F.R.S.E.
Robert Lyster, M.D.
Otto May, M.D.
Frederick W. Mott, K.B.E., M.D., F.R.S.
G. Archdall Reid, M.B., F.R.S.E.
Humphry Rolleston, K.C.B., M.D.
C. W. Saleeby, M.D., F.R.S.E.
James H. Sequeira, M.D., F.R.C.P., F.R.C.S.
David Watson, M.B., C.M.
R. M. Wilson, M.B.
Hugh Wansey Bayly, M.C., M.R.C.S.(Hon. Sec.).

143, Harley Street, W.1.

A Method of Propaganda.

Mr. William Heinemann has in the press a book by Sir Archdall Reid, for which Sir Bryan Donkin has written an introduction, on *The Medical Prevention of Venereal Disease*. The book will include an examination of the memorandum referred to above. The author in a recent letter to *The Times* put forward the proposal that "brief and clear instructions for swift personal disinfection shall be posted in public lavatories," and summarized certain evidence given to the Interdepartmental Committee as follows:

"Instructions, of which the really effective part was conveyed by posters, were given to soldiers inhabiting a group of barracks in a large seaport. The force usually present averaged 2,000, and 20,000 passed through these barracks in two years. Not one man who followed instructions acquired disease, and only seven men, all of whom failed to follow instructions, acquired disease. The rate of infection was therefore 1.75 per 1,000 per annum. In a still larger naval unit not one man who followed instructions acquired disease, and only one man failed to follow instructions. In a large military hospital for venereal diseases not one man of all those who passed through it had acquired disease after immediate disinfection, but nearly every patient had practised 'early treatment.' In India and South Africa results equally remarkable have been achieved by the same simple and inexpensive method. I believe there is not a record, a single instance, of the failure of the method of quick disinfection. The operation is actually about as difficult and dangerous as washing the hands with soap and water."

A Central Hygienic Institute for Infectious Diseases has been established by the Chinese Government. A Central Bureau for the Prevention of Plague was created a year ago, and Mr. Liu Tao Jen, Chief of the Sanitary Department, Nei Wu Pu, and Dr. Yen Chi Chung, Director of the Peking Isolation Hospital, were appointed superintendents.

British Medical Journal.

SATURDAY, OCTOBER 4TH, 1919.

THE MEDICAL CONSULTATIVE COUNCIL.

THE names of the members appointed to the first Medical Consultative Council to form a part of the Ministry of Health are published at page 443. We believe that the medical profession will regard its constitution as on the whole satisfactory. The seventeen medical members seem to represent as fully as was possible within that very limited number its various activities and interests—clinical teaching and investigation, insurance practice and private practice, dental surgery and public health. The inclusion of a pharmacist is appropriate, and if it was considered desirable to go outside the profession itself for an expert in hospital administration a better choice could not have been made than the House Governor of the London Hospital; but the reason for the nomination of a retired professor of chemistry is less obvious. Professor Hopkins represents chemical science in its direct application to medicine, and if a lay representative of science was deemed necessary it would have been wiser to look to some other department, such as physics, which in future must bulk even larger in medical education and practice.

The profession will be gratified to learn that Sir Bertrand Dawson has consented to become Chairman of the Council; a better selection, we venture to say, could not have been made. During the discussions which preceded the introduction of the bill to establish the Ministry he showed that he possessed a strong grasp of principles, a clear view of the important, nay determining, share medicine should have in guiding the policy of the Ministry, and a statesmanlike understanding of practical possibilities. In Mr. C. J. Bond of Leicester the Council has as its vice-chairman a surgeon of scientific eminence, whose width of view and sobriety of judgement have earned for him the respect of the profession and the warm regard of all who know him.

The scheme for a Ministry of Health, approved by the Council of the British Medical Association in January, 1918, recommended that an Advisory Council should be by statute an integral part of the Ministry, and that it should be composed of representatives of all the interests concerned, including the medical profession. The idea was further defined by Sir Bertrand Dawson in his Cavendish Lectures published in our columns on July 13th, 1918, when he said; "The Ministry will need to draw to its counsels representatives from all departments of medicine, both preventive and curative, and these counsellors must have real power, with direct access to the Minister." In an introduction written for the pamphlet in which the lectures were reprinted, Sir Bertrand Dawson, who it will be remembered is a member of the Council of the British Medical Association, discussed the principles which should govern the constitution of the Ministry of Health and showed that their application required that a medical advisory council should be a part of the permanent organization of the Ministry. "To be a reality," he continued, "such council must meet regularly, be empowered to seek information from the heads of departments, have direct access to the Minister and the right to initiate advice." The view thus expressed was endorsed by the joint committee of the English Royal Colleges, the British Medical Association, and the Royal Society of Medicine. The words we have quoted well express the functions the Medical Consultative Council is designed to fulfil, and as we have said, it is eminently satisfactory that one who took so influential a part in the discussions which preceded the institution of the council should be its first chairman.

We will not hesitate to say that the establishment of this Consultative Council marks an epoch in the relation of the medical profession to the government of this country, and will be accepted by the profession as evidence of a desire to provide machinery through which it can in its collective capacity be brought into organic relation with health administration, using that term in its widest sense. It is a new departure fraught with great possibilities of good for the people, and must without doubt affect the line of development of medicine in this country, widening its sphere of influence and increasing its opportunities. It will, we may reasonably hope, mark the end of a parliamentary tradition which constantly tended to place Parliament and the profession in apparent antagonism. Hitherto changes have too often been imposed on the profession from without by the state—that is to say, by the party which had a majority in the House of Commons—without consultation with the general body of the profession, which has thus been forced into an invidious position, being compelled to oppose a scheme it may have approved in principle because the method of application, upon which it alone was capable of forming an opinion, was unsound. "Who sees the end sees the means" has not been true of Governments in the past in respect of health legislation. Commonly they have declared the end before discussing the means with the profession through whose exertions and hearty co-operation only was it possible smoothly and quickly to attain that end.

The establishment by statutory authority of councils to advise a Minister is a principle which if not altogether without some precedent is certainly a novelty in constitutional practice when applied to the machinery of a permanent Ministry. The proposal, though widely approved, came in for a good deal of criticism in both Houses of Parliament on the ground that it would tend to diminish ministerial responsibility. When, however, it is remembered that any proposal of the Council accepted by the Minister must run the gauntlet of the Cabinet, and, in the matter of finance, of the House of Commons, it will be seen that there is very little substance in this objection; whereas the great advantages that may confidently be expected to flow from bringing the Ministry into actual contact with a council composed of members of the medical profession are obvious. The anxiety of purists in constitutional practice has been allayed by the terms of the Order in Council, which directs that the members of the Councils shall be appointed by the Minister. Though the Medical Consultative Council is thus not a representative body in the sense of a body elected by the votes of members of the profession, the Minister gave his approval to and employed machinery for ascertaining the wishes of representative professional organizations. A large number of such bodies, corporate and voluntary, including the Royal Colleges as well as the British Medical Association, were invited to submit names of persons they severally considered suitable to serve on the Consultative Council. The long list thus obtained was referred to a special selection committee, also suggested by medical organizations. This

selection committee, in framing its recommendations, endeavoured to give representation to varieties of knowledge and experience and to different parts of the country in so far as this was compatible with a council of reasonable size. It was with this list before him that the Minister made the appointments now announced. This precedent will, we may anticipate, be followed in future nominations to the Medical Consultative Council.

The Council is not an executive body, its duties are solely advisory. Health administration must remain in the hands of local authorities, and the administrative work of the Ministry must be carried out by its own administrative staff.

Having thus stated what the Medical Consultative Council is not, we may consider the nature of the duties placed upon it. Its responsibilities are very great, being no less than to bring to bear on the policy of the Ministry the considered opinion of the profession with regard to those social and scientific matters on which it is competent to speak. It is only necessary to look at the terms of the Order to find justification for this statement. In the first place, the Council is to report upon questions arising in connexion with the drafting of Orders in Council, and of regulations, orders and special orders, proposed to be made by the Minister; it may be assumed that the Minister will submit such documents to the Council, although this is not specifically laid down. The Minister will also refer to it "questions involving consideration of important principle and scientific difficulty," and any other questions in connexion with such of his powers and duties as relate to matters affecting or incidental to the health of the people; the Minister is charged to place at the disposal of the Council the information required for the consideration of the matters thus referred to it. Two other weighty responsibilities rest upon the Council, and their wise discharge must have a great effect in the bettering of health administration, and incidentally, as has been said, on the development of medical science and practice in this country, and the line along which this development shall proceed. The Council may ask the Minister to refer to it any matter appertaining to its functions, and the Minister must consider this request; further, the Council may, on its own initiative, present to the Minister a report on any matter appertaining to its functions, even though it has not been made the subject of reference to it by the Minister, and the Minister is required to receive and consider such report.

In brief, the Consultative Council has direct access to the Minister and the power to initiate advice. Thus the Council occupies a position of independence which, we conceive, will greatly increase its power for good. The larger and more embracing the Ministry of Health becomes the greater will be its influence on medical affairs, and it is essential that this influence should be along the lines of free natural development of a progressive science and art—for medicine is both. There is no profession which comes into such intimate relation with men's businesses and bosoms, none which depends more for its efficiency on the application of science to practice, and none which is in more need of living knowledge and sympathy from those who have a part in controlling its destinies. While having the highest admiration for the ability and public spirit of the distinguished medical staff of the Ministry of Health, we are convinced that it will be the better for, and have no doubt that it will welcome, suggestions and experience from a body of men and women drawn from the larger world of medicine outside the Ministry. The new Council will look at matters submitted to it from its own practical point of view, and will be able to point to other matters not yet, perhaps, ripe for legislative or administrative action, but in its opinion needing investigation, so that when that time does come full information may be available for the Ministry and the Legislature. There will be no divergence of aim or purpose between the Consultative Council and the permanent medical staff, and it will require no more than simple statesmanship so to co-ordinate their methods and labours as to make the two bodies helpful to each other and to promote unity of effort.

It is important, too, that the profession as a whole should appraise the aims and functions of the Consultative Council aright, not expecting from it the impossible, but realizing that it is there to give advice, and thereby help to mould sound policy—not there to administer, and still less to exercise patronage or promote interests.

THE STRIKE.

The strike has come at an unfortunate time for the medical schools. A number of the London schools had made arrangements for addresses and prize distributions at the opening of the new winter session, and in spite of transport difficulties some of the opening ceremonies were held on the afternoon of October 1st. Thus, Dr. Addison gave the introductory address at the London (Royal Free Hospital) School of Medicine for Women, Lieut.-General Sir John Goodwin distributed the prizes at St. Mary's Hospital, and Dr. S. Squire Sprigge gave an address at St. George's Hospital. The distribution of prizes by Sir Auckland Geddes at Charing Cross Hospital has been postponed indefinitely. The students of this hospital, together with those from St. George's and the Westminster Hospitals, take their first two years at King's College, which is closed for the duration of the strike, but the final year lectures at Charing Cross Hospital will begin on October 6th. The opening of the session at University College has been deferred one week, the arrangements made for the present week having been transferred as a whole to the week beginning next Monday. Lectures began at St. Bartholomew's Hospital on October 2nd, but they will not be in full swing until next week. At the Middlesex Hospital the opening ceremony has been postponed, but the medical school reopened on October 1st, and classes began that day. At St. Thomas's and Guy's Hospitals the work of the winter session began on October 1st. At the London Hospital the session reopened formally on October 1st, but the ordinary classes have not yet commenced, and special arrangements are being made in order that students unable to reach the hospital may not suffer by their enforced absence. All the old students' dinners arranged for this week have been postponed owing to the strike. The chief immediate risks to the public health arising out of the strike are in relation to the supply of milk—especially for children—and to scavenging. So far the efforts of the Ministry of Food to bring milk for distribution in populous centres have been attended with considerable success. The official accounts of the milk distribution in London on Monday show that about two-thirds of the emergency supply was received and distributed; it is hoped that with the development of road transport a full emergency supply will be forthcoming within a day or two. Somewhat similar accounts from the country are received, stating in general that the distribution of milk in the large centres is going on very well. Priority schemes have been provided for in many localities during periods of shortage, under which children and invalids have first claim on the available supply; and food committees in certain districts have been authorized to put

priority schemes into force during the present crisis. Appeal is made for voluntary restriction of consumption by adults, and we would add any force there is in our opinion to that appeal. Its force is greater on behalf of children than of invalids. The effects of depriving infants artificially fed and young children of fresh milk would be serious, and would not disappear until long after the supply had been restored. It would appear that scavenging has not suffered so far; but it must be remembered that should the supply of coal greatly diminish, those areas and towns which depend upon pumping for their water supplies may be placed in a very awkward position. In London, Manchester, and a few other big centres, the difficulty of getting from the suburbs is considerable, and those who have gone still further afield must just now be inclined to regret their enterprise.

THE FUTURE OF GRADUATE EDUCATION IN LONDON.

A PROPOSAL to amalgamate the Fellowship of Medicine and the London Post-Graduate Association was adopted by both bodies at a joint meeting held last week. The new organization is to be known as "The Fellowship of Medicine and Post-Graduate Association," though some simplification of that rather ponderous title will probably be hit upon. The executive committee will consist of the members of the executives of both the constituent organizations. The committees have to some extent been identical in personnel, and the president of both bodies was Sir William Osler, who, it is hoped, will continue to preside over the combined body. The machinery of post-graduate courses which has been set up by the Fellowship is to be used and extended and improved. Of the two combining bodies the first in actual origin was the Post-Graduate Association, but owing to war conditions it remained dormant for two years, and was not formally organized until the meeting held at the Royal Society of Medicine on April 29th last (JOURNAL, May 3rd, page 551). Meanwhile the Fellowship of Medicine had been constituted on December 4th, 1918 (JOURNAL, December 28th, page 722), and formulated an emergency post-graduate scheme to fill up the interval until the more permanent scheme of the association could be launched. Sir Humphry Rolleston, who has been chairman of the executive committee of the Fellowship, made it plain that the post-graduate courses were undertaken without prejudice to the larger future effort. The immediate object of the Fellowship was to assist the many medical men from the Dominions, the United States, and the allied countries who were in London in the early part of the present year. Its success was due in great measure to the energy of Mr. Philip Franklin, F.R.C.S., who is an American by birth. The Fellowship of Medicine is going ahead with its various courses by arrangement with the medical schools in London. The future programme and the details of more ambitious schemes have to await the first meeting of the new committee, which we understand will shortly be called. Meanwhile the course arranged by the Fellowship of Medicine is in full swing, and members have the opportunity of attending clinical lectures and practice at most of the principal London hospitals. In addition specia lectures are given several times a week at the house of the Royal Society of Medicine, 1, Wimpole Street, London, W. A copy of the *Bulletin* and full particulars can be obtained on application to the secretary of the Fellowship of Medicine at that address.

THE RED CROSS UNDER THE LEAGUE OF NATIONS.

THE British Red Cross Society and the Order of St. John, whose spheres of activity are similar, have come to an agreement to work together through a Joint Council, as they worked with so much success throughout the war. The members of the existing Joint War Committee are members of the new Joint Council, which will consist of twenty-four persons appointed by the British Red Cross Society and a like number appointed by the Order of St. John. The new Joint Council will have general control of the work of the two corporations, and without its consent neither can make a public appeal for funds. Sir Arthur Stanley, Chairman of the Joint War Committee, has issued a memorandum explaining the situation. In it he states that it is anticipated that the petition of the British Red Cross Society for an extension of its existing charter, in order that it may be empowered to deal with the work contemplated in Article XXV of the Covenant of the League of Nations, will be granted. This article provides that "the members of the League agree to encourage and promote the establishment and co-operation of duly authorized voluntary national Red Cross organizations having as purposes the improvement of health, the prevention of disease, and the mitigation of suffering throughout the world." The matters to which Sir Arthur Stanley suggests attention should immediately be given are: assistance for sick and wounded, whether still on the active list or demobilized, to supplement that given by the War Office and the Ministry of Pensions, and as long as may be necessary for men who have been prisoners of war. The War Committee has been working in close connexion with the National Association for the Prevention and Cure of Tuberculosis; grants in conformity with its scheme have recently been made to many counties, and it is proposed to continue this co-operation. The Central Council of Child Welfare recently formed will, it is hoped, work under the auspices of the Joint Council. Many V.A.D.'s have already taken up such work, and many others, it is stated, are only waiting for an opportunity to do so. Assistance will be given in all branches of nursing, health, and welfare work ancillary to the Ministry of Health, and in this way it is believed that many openings will be provided for V.A.D. workers. Scholarships have already been given, and it is hoped that many will be willing to qualify themselves to render that supplementary assistance to the regular nursing profession which they rendered so efficiently and successfully in time of war. It is intended to continue the system of work parties to provide garments, etc., for hospitals and health institutions, and to maintain the Red Cross hospital library. At the end of the war the Joint War Committee found itself with a large number of motor ambulances in France and elsewhere, and a scheme was instituted by which ambulances have been placed, under the control of county directors, in various suitable localities, so that a network of ambulances is being established, covering practically all the country districts. It is hoped that through it all sufferers will be within easy reach of an ambulance, which can either bring assistance to them or take them to the nearest hospital. The question of future V.A.D. organization is under consideration, and will eventually, along with the other matters mentioned, come under the control of county committees, comprising representatives of the British Red Cross Society and the Order of St. John, and of societies dealing with tuberculosis, child welfare, and other activities coming under the definition of "Red Cross work" in the Covenant.

TUBERCULOSIS IN WALES.

THE seventh annual report of the King Edward VII Welsh National Memorial Association for the Prevention, Treatment, and Abolition of Tuberculosis, presented to the Governors in July, 1919, contains a very valuable summary of the methods of procedure at present employed, and a detailed account from the medical point of view of the future requirements for effective suppression of the disease in the home. The Principality has given warm support to the scheme, and all the counties, with the single exception of Pembrokeshire, have contributed their share to the

success of the movement. The reasons for this isolation of a single county are difficult to discover, but it would appear that the authorities in Pembrokeshire are not only unwilling to take a share in the work, but have failed to pay the debt incurred by them for the treatment of their cases by the association. Under the presidency of Major David Davies, M.P., the council of the association has entered upon ambitious schemes, some of which are rapidly taking concrete form. Not only are several additional sanatoriums to be started, but a plan of pecuniary relief to families deprived for a time of their breadwinner—for purposes of early treatment—is being urged upon Government authorities. This plan, if accepted, will go far to overcome the reluctance now so often felt by the consumptive head of the family to give up work for the sake of the prospective arrest of the commencing disease. Further powers for the segregation of infective cases and for systematic teaching are being sought, and in every direction the association is setting an example of energy which deserves recognition and imitation.

MALARIA IN ENGLAND.

WHAT was somewhat alarmingly described in the newspapers of last week as an outbreak of malaria occurring at Fletton, on the outskirts of Peterborough, proves to have been limited so far to a single case. We learn on inquiry from Lieut.-Colonel S. P. James, who is adviser on malaria to the Ministry of Health, that from January 1st, 1919, to the present date 36 cases of indigenous malaria in various parts of England and Wales have been reported to his department and investigated. Not all the cases reported have proved to be malaria, and of the malaria cases not all have been found to be indigenous. At least 25 cases, however, have been found to be true indigenous malaria contracted during the present year, and that being so, the localities in which they have occurred are of interest, since these are evidently danger areas. The only considerable group of cases occurred in the Isle of Grain, between the Medway and Thames estuaries in Kent, and in the Sheerness and Queenborough districts of the Isle of Sheppey. Single cases have occurred at the following places: Colchester and Brightlingsea (Essex), Peterborough and St. Ives (Huntingdonshire), Coalport (Shropshire), Emsworth (Hampshire), and Chatham (Kent). A large proportion of these true cases—perhaps even the majority—have occurred among children. Each case has been inquired into by Colonel James and his assistant, Major A. C. Parsons, and very careful precautions have been taken, in accordance with the malaria regulations of 1919, to prevent the spread of infection. Where only one case has occurred in a district, the medical officer of health is instructed, if he considers that action is necessary to prevent spread, to take steps to ensure that the person suffering from malaria is supplied with efficient mosquito netting, receives necessary quinine treatment, and is advised as to its continuation in order to prevent relapses, and as to precautions to be taken to prevent the infection spreading. On the occurrence of two or more cases in a district the local authority may, on its own initiative or on the instructions of the Ministry of Health, appoint and pay a medical practitioner, approved by the Ministry, to make systematic visits to houses where malaria has occurred or where risk of infection arises, and offer to examine persons suspected of infection, and endeavour to obtain material for microscopic examination. He has also to see that effective measures are taken to prevent spread. In 1918 the indigenous cases reported numbered 99; in 1917 they numbered 231, the majority occurring in Sheerness and Sheppey and in Sandwich. There is a doubt, however, as to the year in which the infection was contracted in some of the cases; a certain number of patients who are discovered in a particular year really contracted their infection during the previous autumn, though it remained latent during the winter.

CAUSATION OF INDUSTRIAL ACCIDENTS.

THE etiology of accidents is no doubt highly complex; some accidents, such as being struck by lightning, are pure accidents, or, in the old phrase, by the visitation of God; others, including the "didn't know it was loaded" case, are due to natural incompetence or folly, and there are many intermediates. In a study of trivial accidents occurring in munition factories, Dr. Major Greenwood and Miss Hilda Woods[1] have applied statistical methods to discover whether (*a*) the principal factor is pure chance, or (*b*) individual peculiarities of the workers, or (*c*) the loss of nerve engendered by once having sustained a pure accident and becoming thereafter less self-possessed. They conclude that the factor (*b*) is the most important, individuals being self-consistent in their liability to or immunity from accidents in different months. Regarding runs of trivial accidents as evidence of unsuitability for operations involving risk of injury, they suggest that the records of works' ambulance rooms may be of considerable value to the organizer.

THE HARVEIAN SOCIETY OF LONDON.

THE Harveian Society of London is one of the oldest metropolitan medical societies, having been founded nearly one hundred years ago. Dr. Anthony Todd Thomson and Dr. Marshall Hall were its first presidents, in 1831 and 1832. Meetings continued to be held regularly in the early years of the war, but in 1917 the society suffered an almost complete but temporary eclipse, for a bomb fell at the corner of Titchborne Street and Edgware Road, completely wrecking the rooms in which its meetings were held. Subsequently a few meetings were held at St. Mary's Hospital. The society hopes now to resume its activities. It has been decided that for the present the meetings shall be held in the rooms of the Medical Society of London at 11, Chandos Street, Cavendish Square. Sir Berkeley Moynihan has promised to open the session on Thursday, October 23rd, at 8.45 p.m., with an address on the diagnosis and treatment of gastric ulcer, to which all medical practitioners are invited. We are informed that a full programme for the rest of the session is being prepared. Sir Thomas Horder will deliver the Harveian Lecture of the society on a Thursday evening in March to be announced later. The president this year is Dr. James Taylor.

NOTICE TO MEMBERS.

OWING to the railway strike the postal authorities are unable to undertake to deliver this issue of the JOURNAL through the post except within a radius of ten miles from the General Post Office, London. The issue will be forwarded to every member as soon as the Post Office is able to undertake delivery. Meanwhile steps have been taken to place a copy of the issue in the hands of the Secretaries of Divisions and Branches of the Association at the end of the week or at latest on Monday, and it is hoped that they will take every opportunity of explaining the circumstances to members. Owing to the dislocation of business and the difficulty in obtaining supplies of paper, it has been found necessary to curtail the number of pages in the current issue of the JOURNAL, and in particular to postpone the publication of the Epitome.

[1] *The Incidence of Industrial Accidents upon Individuals, with Special Reference to Multiple Accidents.* By Major Greenwood and Hilda M. Woods. (Report No. 4, Industrial Fatigue Research Board.) Stationery Office. 1919. Price 6d.

DR. JOHN W. STANIFORTH of Hinderwell, S.O., Yorks, has been added to the Commission of the Peace for the North Riding of Yorkshire.

Correspondence.

INTRAVENOUS INJECTIONS OF GUM SOLUTIONS IN CHOLERA.

Sir,—I greatly regret that the letter to which Sir Leonard Rogers refers in your issue of September 20th had the misfortune of never reaching me. I would otherwise have made more experimental investigations in order to try to find out the cause of the failure of gum-saline in the cases related by him. It is possible that, owing to the concentration of the blood, the addition of gum may produce too great a viscosity. This is an inappropriate property in such circumstances, and I have searched for a substance having the correct osmotic pressure, which is the essential thing, and at the same time one to which the blood vessels are impermeable; hitherto without success. Some experiments which I have already made do not indicate the production of excessive viscosity with gum. The solution as made by Telfer's process at Boulogne had only a viscosity of twice that of water, while normal blood may have four or five times that of water. The fact that some of the cases of failure were not very severe cases of cholera is also an argument against the viscosity hypothesis.

The symptoms described by Sir Leonard Rogers—distress, cyanosis, and difficulty of breathing—remind one of occasional reports from the army in France, where unpleasant effects were sometimes noticed from solutions prepared locally. But it appears that they were not noticed after the regular supply of the solution from Boulogne. The cause is not clear, but was attributed to the water. This can, however, scarcely be the explanation of Colonel Leventon's experience. It would be of great interest if we could have a more detailed report from Colonel Leventon as a basis for further experimental work.

With regard to the excretion of toxic substances through the kidneys, one of the most striking facts in my experiments was the restoration of the flow of urine by gum-saline when it had stopped from various causes, such as low blood pressure, destruction of blood corpuscles, etc. It might, perhaps, be worth trying the effect in cholera of alternate injections of saline and of gum-saline, in order to increase the renal excretion and at the same time maintain the blood pressure. But I understand that Colonel Leventon has tested the action of dilute solutions of gum.

Doubtless the use of serums would be a great advance, and if the difficulties attending gum-saline could be overcome—as I feel certain they can be—the combination of the two would enable an efficient circulation to be kept up while the curative treatment was in progress.—I am, etc.,

London, N.W., Sept. 25th. W. M. Bayliss.

THE NERVOUS SYSTEM IN PERNICIOUS ANAEMIA.

Sir,—It is no new idea that in pernicious anaemia the disease often invades the nervous system. In the *Australian Medical Gazette* of December, 1905, p. 644 (long before Woltmann in 1919), I wrote: "In this case nervous symptoms of a pronounced kind developed. He had delirium and severe lightning pains down his legs and through the abdomen in paroxysms; paraesthesia and later anaesthesia, especially in patches, and paresis ending in paralysis; wasting also occurred. For some time the knee-jerks were exaggerated; later they disappeared. There was also paresis and anaesthesia of the bladder, and failure of the sphincters. Cystitis and bedsores also occurred, though splendid nursing postponed these troubles. The nervous symptoms of pernicious anaemia vary. They may be tabetic in type—loss of light reflex, loss of knee-jerks, lightning pains, anaesthesia, and sphincter troubles, but may be rather related to functional disturbances of the pyramidal tracts (I had one case of this kind resembling progressive muscular atrophy)."

My article was based upon a series of cases which came into my ward (Prince Alfred Hospital) under varying diagnoses, such as "ulcerative endocarditis," "dysentery," "Bright's disease," "asthma," and "obstructive jaundice," because no blood examination had been made. The blood examinations are given in my article, and megalocytes and megaloblasts were found in all.—I am, etc.,

W. Camac Wilkinson, M.D., F.R.C.P.

London, W., Sept. 25th.

STIFF KNEE IN COMPOUND FRACTURE OF FEMUR.

Sir,—In examining a considerable number of pensioners who have had fractures of the femur resulting in stiff knee I have been struck with the abnormal position of the patella, and it occurred to me that if this could be prevented a great improvement would result.

In the normal knee at rest in full extension the lower extremity of the patella is about a quarter of an inch above the level of the lower end of the femur, and if held in this position by the hand it will be seen that the knee can be flexed 30 degrees without the patella moving downwards. If the patella be pulled downwards with the knee extended and at rest, flexion as far as 45 degrees or even further can be obtained without further downward movement.

If now the quadriceps be contracted when the knee is straight, the patella is drawn up from the normal resting position for about half an inch, and it is in this position that one finds it in cases of stiff knee. Any attempt to move it downwards will meet with very little success owing to the shortened muscle.

I suggest, therefore, that in treating a case of fractured femur the quadriceps muscle should be put on the stretch from the very beginning either by a silver wire through the patella or through the tendon just above. By fixing the wire in a loop and attaching it to the leg or to the splint the patella can be kept in the normal resting position, or just below it, thus preventing contraction of the quadriceps. By removing the extension for a short time the muscle can be exercised and movement of the patella assured.

A point that may be overlooked is that the injury which causes the fracture also sometimes causes partial rupture of the ligaments of the knee with consequent haemorrhage into the joint resulting in increased liability to stiffness. It is probably this injury which is the cause of so many cases of lateral movement of the knee following gunshot wounds of the femur.

In treating any fracture of the limb bones it is well to remember that

(*a*) All muscles put at rest for a considerable time tend to contract—this is increased by the presence of extravasated blood and still more by sepsis.

(*b*) No harm is done by keeping a muscle stretched to its normal length.

—I am, etc.,

Harrogate, Sept. 23rd. C. D'Oyly Grange.

Sir,—May I add a few words to what Colonel Broome-Giles has said in your issue of September 27th regarding ionization for stiff knee? It is important when the stiffness follows exudation into the joint, or inflammation of the muscles and tendons which move the joint, to begin treatment early before the exudates become organized into dense fibrous tissue. The knee-joint being superficial, is specially suited for ionization treatment, since there is no thick layer of muscle, as in the case of the hip-joint, to shunt the current off before it reaches the part we want to treat. The ion introduced should be an anion, and of the various anions the salicyl or chlorine ion is the most suitable. Consequently the electrode should be attached to the negative pole. Great care should be taken to envelop the joint with many layers of tissue moistened with a solution of sodium salicylate or of common salt. The bandage should be evenly applied and no undue pressure exerted on a bony prominence, or a burn will result. Each treatment should be long—an hour with a considerable strength of current, 60 milliampères or more—and the treatments should be given twice a week. The solvent action common to all anions is well shown by a laboratory experiment of Professor Leduc.

Some white of egg is poured into a U-tube, which is then placed in boiling water to coagulate the albumen. An equal quantity of a solution of sodium chloride or other salt is added to each limb, and a wire connected with the positive pole of a battery is dipped into the solution in one limb, while a wire from the negative dips into that in the other limb. After the

current has flowed for some time it will be seen that the levels of the solution in the limbs are no longer the same—that on the positive side has fallen, while that on the negative side has risen. Moreover, the albumen on this side of the bend has been dissolved.

It is to this solvent action on exudates and imperfectly organized adhesions that the benefit resulting from ionization with chlorine or salicyl ions is to be in a large measure ascribed. It is often advisable to choose an anion whose specific properties are also beneficial for some special symptom—for example, pain. Thus, by using the salicyl ion we combine the solvent action of an anion and the soothing effect of the salicyl.—I am, etc.,

London, W., Sept. 29th. A. R. Friel.

SCHOOL MYOPIA.

Sir,—I have read with interest and not a little amusement the leading article entitled "School Myopia." For once, Mr. Editor, you have been caught napping—a rare event, I will allow. For this article is no "leader." It is a piece of polemical writing which should properly have had attached to it the author's name.

The article is curiously lacking in balance. It is aflame against one limited theory of the causation of myopia, and as ardent for another equally circumscribed. There is a lengthy tirade against the assumption of a "school myopia," all because myopia is found in illiterates and rural peoples. Incidentally, there is an attack on the myope classes first established in London and now widely adopted in this and other countries. "School myopia" is a term of currency; it implies nowadays a low degree of myopia, up to three or four dioptres. The use of the term is as familiar as that of the term "artery." Both terms carry a definite connotation to our minds, and both are remote from the original conception implied in their derivation. We know now that there are many conditions that go to the production of myopia, whether of low or high degree—heredity, congenital defect, illness, bad social conditions, and too much close eye-work. Your writer denies the influence of the last. I believe in its influence. Indeed, I am sure of it on the evidence at my disposal. Further, of the five causes or predisposing conditions of myopia, it is the one that we can directly deal with in education, and for that reason it must weigh heavily in our minds.

The attack of your writer on the conception of the myope classes is due to want of knowledge. No "school myopes" are admitted to these classes; the places are reserved for those children who are short-sighted to a serious degree, whether by reason of high myopia, scarred eyes, or congenital defect. These children have bad vision, and because of this they are not normal children, and are not fitted to join in the normal curriculum adopted for those who have normal or average vision. The implication of your writer that the existence of these myope classes is based on a theory of myopia is wrong. It is based on the necessity for meeting as satisfactorily as we know how a heavy handicap which tells seriously against the chances of a fair start in life for these children. The scheme of education adopted for the children in these classes does not "restrict their future career of usefulness." The scheme is essentially a reversion to natural conditions, where the mind of the teacher is the light of the pupils instead of the school book. Educationalists are trying, and with a very real measure of success, to improve the conditions in which children, both normal and abnormal, use their eyes in school, but your writer apparently would have us do—nothing!—I am, etc.,

London, W., Sept. 27th. N. Bishop Harman.

Sir,—I have read with much pleasure the leader in last week's British Medical Journal on myopia, and entirely agree that there is no evidence supporting the theory that the use of the eyes for near work causes myopia. In the *Lancet* of January last year I wrote an article based on the detailed examination of a very large number of cases of myopia, and the cause of myopia appears to be intermittent increase of intraocular tension through back pressure on the veins and lymphatics of the eye. This is caused by certain diseases—bronchitis, whooping-cough, and particularly measles—and certain forms of exercise such as heavy lifting, particularly with the eyes pointing downwards. The relation of cause and effect is very striking, as indeed is the result of stopping the cause. A child whose myopia has been increasing term by term has no further increase when these exercises are forbidden; raising itself up and down on its hands is a particularly objectionable form of exercise from the point of view of producing myopia.

It should here be pointed out that intermittent increase of intraocular tension is an entirely different thing from a continued increase, especially as in the former case the optic disc is supported by the back pressure in the lymphatics.—I am, etc.,

London, N.W., Sept. 30th. F. Edridge-Green.

"D.A.H." AND "V.D.H."

Sir,—After reading the very interesting article on the etiology of "D.A.H.," by Dr. J. A. Venning, in your issue of September 13th, I went through my own notes on 124 heart cases that came under my personal care in the —— General Hospital in Mesopotamia during 1917 and the first half of 1918.

As to diagnosis, 70 were received labelled "D.A.H." and 54 labelled "V.D.H." Of these latter, after consultation with Captain C——, M.D., thirty-five were rediagnosed as "D.A.H." One "D.A.H." was a "V.D.H." With regard to causation, out of 19 genuine "V.D.H.'s" 12 gave a history of rheumatic fever, 3 of scarlet fever, and 2 of diphtheria; the other two appear to have given no relevant history. Infections certainly played an important part in the causation of "D.A.H.": Dysentery and "diarrhoea" (probably untreated dysentery), "I.C.T." of various kinds, malaria, enteric group, and sandfly fever in order of frequency.

Intoxications: Pyorrhoea alveolaris with dental caries, "E.O.H.," and tobacco, in order of their frequency.

The tremendous heat of the summer of 1917, when a shade temperature of 120° was by no means uncommon, was also a potent factor in the causation of broken compensation and the onset of D.A.H.

The care of the teeth is certainly not made enough of in the army or in civil life, and I am sure that the amount of invaliding directly traceable to it was very great in our force. I believe that compensated V.D.H. can be broken down by it, and D.A.H. inaugurated and kept going by it. Its influence on dysenteric, enteric, and gastric cases is far-reaching but wide of the point here.

Tobacco was without doubt a frequent cause of D.A.H., and the rapidity of recovery of several obstinate cases of D.A.H. when the cigarettes were either stopped altogether or limited to one after each meal was most striking. In the end all my D.A.H. cases were strictly rationed as to cigarettes, and a few "incurable" cases returned quickly to duty.

During recovery a graduated system of physical exercises carried out under the direct supervision of a medical officer was very helpful. As regards treatment for the heart condition itself, potassium bromide gr. x thrice daily was most generally useful.—I am, etc.,

A. H. H. Howard, M.R.C.S., L.R.C.P.

Sheffield, Sept. 22nd.

AN ARMY VENEREAL DISEASE CLINIC.

Sir,—As my experience runs directly contrary to the views advanced by Dr. Rhys in the British Medical Journal of September 20th, p. 378, concerning the extent to which the men availed themselves of prophylactic measures provided at venereal clinics, I venture to submit the following facts:

I was in medical charge of two camps in Alexandria for a year—

(*a*) A small camp consisting of 200 to 300 men,
(*b*) A larger camp, about 800 to 1,100 men,

in both of which prophylactic accommodation was provided. I was also responsible for a similar place for the use of men on leave.

Unfortunately I have not the actual figures here. But as I rendered a weekly return to head quarters I can fairly accurately quote the average:

(*a*) 30 to 40 (12–13 per cent.) availed themselves each week.
(*b*) 20 to 30 (2½–3 per cent.) availed themselves each week.

I account for the apparent discrepancy in the proportion of these figures by the fact that the necessity for prophylactic measures was not present to so large an extent in the latter camp as in the former.

The returns for the third place varied directly with the number of men on leave, up to 30 or even more a week.

The number of men admitted to hospital suffering from venereal disease (including soft sore) was:

(*a*) One man in 3 weeks, less than 1.6 per cent. per week.
(*b*) One man in 4 weeks, less than 1.32 per cent. per week.
Casual men on leave, one man in 4 weeks.

—I am, etc.,

D. N. HARDCASTLE,
Haywards Heath, Sept. 26th. Captain R.A.M.C.T.

"THE CULT OF INDIVIDUALISM."

SIR,—Dr. Fothergill has had the courtesy to send me in advance a copy of his last letter to you. He takes up two points in my letter in your issue of September 20th.

The first concerns the meaning of individualism, and is a purely academic question of no special interest in medico-politics; and I see no object in carrying it further.

The second, however, is of real importance. To quote Dr. Fothergill's own words:

> The weak link . . . is . . . some few or more . . . members of the medical profession itself who would at the last push be in a position—owing to the present economic conditions of medical practice—to flip their fingers at any attempt made to dictate to them how and in what manner they should conduct their professional activities . . .

When I read this I took off my glasses, rubbed them, and read again. The words were still there. Why, Sir, this is the case for trade unionism, and not an argument against it.

The Coventry case has made it clear to the meanest capacity that the British Medical Association is powerless to deal with the sort of person described in Dr. Fothergill's words. We of the trade unions say and believe that we are not so powerless. If so, well and good; let the trade union grow. If not, still well; no harm is done, unless too much energy is wasted in mutual fighting between the Medico-Political Union and the British Medical Association.

Why does not Dr. Fothergill join me in asking individual members of the profession to support the British Medical Association *and* the Medico-Political Union?—I am, etc.,

York, Sept. 27th. PETER MACDONALD.

SIR,—In these days of unrest and turmoil it seems to me that, as a profession, we need to guard against the growing evils of trade unionism in our midst. We must, of course, have some organization to defend our interests and obtain just and adequate terms, but anything which savours of an interference with the medical services to the community on any pretext whatever cannot be too strongly condemned.

Let us, whatever may happen, avoid the pitfall into which trade unionism has led organized labour, for we hold a position of trust and confidence, built up for us by generations of practitioners, which is quite unique and cannot be too jealously guarded.—I am, etc.,

Bridgwater, Sept. 28th. RICHARD COATES.

MEDICAL MEN IN PUBLIC LIFE.

SIR,—At different times it has been urged in your JOURNAL that doctors should take some part in public life, and become members of councils or boards of education.

I was nearly twenty years a member of an ancient corporation with very ancient ideas, and it was not a bed of roses. Perhaps a short account of my experience might be useful to some of your readers. First, my fellow practitioners looked askance at me, as one seeking a cheap advertisement; others sought out some way by which they might reap some small advantage. How I was drawn into the vortex of local politics it is not necessary to relate.

The opposition in the corporation was remarkable; when I moved the adoption of the Notification of Diseases Act (this was a long time ago) I was strongly opposed by an old doctor, an alderman who was styled a sanitary reformer; his opposition was purely on personal and political grounds; a second attempt to get it adopted in the following year was crowned with success.

The housing question was like a red rag to a bull; it was denounced by all parties, and my introducing it was regarded by many as an act of audacity. With outside help, however, I was able to employ an expert in inspecting slum property, and the very comprehensive report he drew up was presented to the corporation. The report was promptly pigeon-holed, but a second copy was retained by me, and was extremely useful in keeping up the agitation for many years. And this agitation was not fruitless, for many houses were built and several good building sites came into the market.

In later years a citizens' league was formed to study all questions relating to the well-being of the community. The old city was repeatedly visited by small-pox epidemics, and it was then possible to render some service for the public good, especially when it was decided to provide a fever hospital. The medical officer of health was badly paid, but his salary was augmented without opposition. For a time I held the unique position of chairman of the health committee of the urban district council whilst I was medical officer of health to the rural district council.

When elected mayor I initiated a reception which gave much satisfaction; the sweep and the milkman met the dean and archdeacons, and all shook hands with the mayor and mayoress. Also I managed to introduce and provide the proper insignia of office, and brought about an improvement in the style of dress of the aldermen of the council. I was able to give a helping hand to the St. John Ambulance Association by having a big parade of miners holding certificates, a special service in the cathedral and a special preacher, with a meeting to follow to discuss ambulance work.

The work of the council was a great call upon one's time; it was necessary to attend at least a hundred committee meetings in the year; the real work is done in committee.

It cost me dear to be an enthusiastic reformer. Personal abuse, threats of personal violence, and slander were amongst the rewards for the services rendered; yet there was a satisfaction in having aroused public opinion on matters affecting the welfare of thousands.

One suggestion I would make for those wishing to enter public life, and that is to obtain the support of fellow practitioners of the Division or Branch, and so voice the feelings and wishes of the profession in a more determined manner and with greater force.—I am, etc.,

EDWARD JEPSON, M.D., J.P.,
Ruislip, Sept. 23rd. Ex-Mayor and ex Alderman, Durham City.

RURAL PRACTITIONERS' REMUNERATION.

SIR,—It is to be hoped that the Insurance Acts Committee and its Rural Practitioners' Subcommittee are pressing the subject of mileage for rural and semi-urban practitioners. The acceptance or rejection by such categories of practitioners of any capitation fee likely to be offered by the Ministry of Health must depend largely upon a suitable mileage grant being obtained, as a differentiation of capitation fees appears to be both impolitic and difficult to work.

That rural practitioners require special consideration in fixing remuneration is now generally recognized by all who have gone into the question, and figures have been published which have tried to express in £ s. d. the extra cost in time and money incurred in visiting in country areas. The special grant on account of extra practice expenses was an attempt to level things up, but the basis upon which it was divided among areas was faulty, and the amount quite inadequate.

Taking my own experience, with a medical list of about 700, as a case in point, I have travelled 2,688 miles to see insured patients so far this year. At 6d. a mile, a conservative estimate, this works out at £67 4s., or for the whole year £84. My mileage grants will come to about £32; thus I am at a disadvantage of £52 in motor costs alone when compared with my colleague with a list of the same size in a large town.

The time element must also be allowed for. Probably 12 miles an hour is a fairly accurate estimate of average speed attained in visiting country patients. A great deal of the mileage is done over twisty, narrow lanes, often with an excruciating surface; or on foot along field paths or up hillsides, half an hour or so each way being frequently occupied in one of these walks. If 12 miles an hour is a fairly accurate figure, I have spent 224 hours, or twenty-eight full working days of eight hours each, in travelling the 2,688 miles, or, reckoning my time as being worth 7s. 6d. an hour, £84 for the nine months, or £112 for the entire year, for which no allowance is made. This is over three times the total of the present grants.

To put the rural practitioner in this area in a position comparable with that of the urban man, it is therefore necessary for him to have a mileage grant at least six times as large as he gets at present.

I am not forgetting that the urban practitioner has to travel and spend time in getting to his patients, but the advantages which accrue from large lists must about counterbalance that, otherwise the town men would not be apparently pleased with the insurance scheme.

It is difficult to estimate what would satisfy the semi-urban practitioner who in this area has not had any mileage until 1918, but no doubt a substantial sum would be required to put him in an equally advantageous position with the urban man.

Whatever the amount of the grant, let us hope that there will be no "discounting." (The grant for this area has never paid more than about 70 per cent. of the unit approved as reasonable by the Commissioners in the mileage scheme of the area.) If the Ministry agrees that such and such a sum is fair in respect of each insured person in any area, let it be paid in full, and not with annoying deductions, of whose correctness the doctor is unable to satisfy himself. I suppose we do not insist on having our premiums paid in advance at the commencement of the period of risk (like all other insurance), because we rely on the Government to pay with certainty. The least they can do, then, is to pay in full when they do discharge their debts.—I am, etc.,

September 24th. TRAVELLER.

SELECTED EMPLOYMENT FOR TEMPORARY OFFICERS R.A.M.C.

SIR,—Apropos the discontent existing among temporary R.A.M.C. officers may we suggest that, if their compulsory retention in the army is proceeded with, some recompense should be given in such matters as choice of work and station.

In contrast to the regular officer, who is meanwhile getting on very contentedly with his life's work, the conscripted temporary officer is not merely marking time, but losing time, becoming rustier, and mentally jaded; does it not seem fair that the latter, particularly if he is a 1914–15 man, should be allowed to do his service in some place where he could employ his spare time profitably? For example, post-graduate study is urgently necessary; many would sign a new contract, and do their military work with a better will, if something of this sort could be brought within reach, to compensate a little for loss of time, and freedom, and money.

And what about the recent graduate enjoying a glorious freedom, while we, with several years of our lives torn away, are still wondering, not only when, but if, we are to be allowed to carry out our own plans?—We are, etc.,

September 20th. TWO TEMPORARIES.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—In reply to Dr. Rooke, I do not know what arrangements were made by Dr. Rooke with his colleagues for looking after his patients during his absence, but I suppose that a certain proportion of fees were received by him in addition to his army pay, not to mention his army rations, which were certainly generous! I remember the phrase "rare and refreshing fruit," which somehow failed to mature; and although I worked day and often night without a holiday through the war I have had no experience of the "rich financial fruits" mentioned by Dr. Rooke.

With regard to the question of medical profession *v.* clerk I think Dr. Rooke has rather stretched a point, possibly to bring in his little witticism, "If so, he made a mistake in the choice of his profession." Does not my remark point to the fact that there were doctors doing clerical work in the army who would have been better employed doing medical work at home, and we should have welcomed their services. I am the man who stayed at home. I have looked at my books, both of receipts and expenses, and I can assure Dr. Rooke that his obvious inference is like many other obvious inferences, not founded upon fact. I do not intend to pursue this subject further, as, having stated facts, discussion is unprofitable.—I am, etc.,

Bedford, Sept. 20th. S. J. ROSS.

THE MEDICAL SERVICE AT ST. PAUL'S.

SIR,—Will you allow me to call the attention of your readers to the advertisement on another page of the special service to be held in St. Paul's Cathedral at 7 p.m. on Tuesday, October 21st, with the Lord Bishop of London as the preacher?

All medical men and students are invited to attend, and the Medical Guild of St. Luke, which was founded in 1864, desire that the attendance at this thanksgiving service should be worthy of our profession.—I am, etc.,

GEORGE COWELL,
London, S.W., Sept. 29th. Provost.

Obituary.

MAJOR GEORGE MAGILL DOBSON, R.A.M.C. (retired), who died on September 17th at Penmaenmawr, North Wales, aged 58, was the eldest son of the late Robert Dobson, of Mohill, county Leitrim. He was born on April 11th, 1861, and educated at Trinity College, Dublin, where he graduated B.A., M.B., and B.Ch. in 1883. He entered the army as surgeon in 1885, became surgeon-major in 1887, and retired in 1905. He served in the Sudan campaigns of 1885–86, with the Frontier Field Force, receiving the Egyptian medal and the Khedive's bronze star; and in the Lushai campaign of 1892, in the operations against the eastern Lushai clans, receiving the Indian Frontier medal with a clasp. As a member of the Reserve of Officers, he rejoined for duty in the late war on August 6th, 1914, but had been demobilized over a year ago.

MR. FREDERICK WALTER LOWNDES, M.R.C.S.Eng., died at his residence in Liverpool on September 2nd, aged 81. After leaving school he began business as a clerk, but subsequently studied for the medical profession at the Liverpool School of Medicine and the University of Edinburgh. He took the diplomas of M.R.C.S. and L.S.A. in 1865, and after serving as resident surgeon to one of the Liverpool hospitals proceeded to London. He returned to Liverpool in 1868 and commenced practice as one of the district medical officers of the parish. In 1877 he was appointed surgeon to the Liverpool City Constabulary, and retired from that office in 1911 after thirty-four years' service. He took great interest in the status and duties of coroner, and was the author of *Reasons why the Office of Coroner should be held by a Member of the Medical Profession*, which ran through three editions. He also contributed papers to the *Liverpool Medico-Chirurgical Journal* on the study and treatment of venereal diseases, drawn from his experiences as surgeon to the Liverpool Lock Hospital. The funeral took place on September 5th, and was attended by a number of Liverpool medical practitioners.

SIR JOHN FURLEY, C.H., C.B., one of the most active of Red Cross workers, died on September 27th, at the age of 83. In 1868 he joined with Sir Edmund Letchmere and other members of the Order of St. John in forming a provisional committee for the establishment of a National Aid Society for the relief of the sick and wounded in war; he was one of the delegates to the first international conference at Berlin, and had attended nearly all the international Red Cross conferences since that date. On the outbreak of the Franco-Prussian war the English branch of the National Committee of the Red Cross was formed. Mr. Furley, as he then was, was commissioner for the British Society during the war, and after the armistice went with his supplies to Paris, where he remained throughout the Commune. He received the honour of knighthood in 1899, and on the outbreak of the war in South Africa designed, and afterwards commanded, the hospital train sent out at the suggestion of Princess Christian. Age sat lightly upon him, and at the beginning of the European war he was able to render valuable service to the Red Cross, especially in the designing of hospital huts and hospital trains.

PROFESSOR FILIBERTO MARIANO, of the University of Genoa, died on August 23rd. He founded and edited till the end of his life a periodical entitled *Le Malattie del cuore e dei vasi*.

The Services.

THE NEW NAVAL RATES OF PAY.

In the JOURNAL of July 26th, 1919, p. 121, we gave a summary of the recent Admiralty Order announcing the new rates of full, half, and retired pay for naval officers. Although certain features of the new rates have been criticized lately in our correspondence columns by naval medical officers, there can be no doubt that, taking the Admiralty Order as a whole, the Naval Medical Service has gained substantially, and most of the important points have been conceded which were pressed for in the memorandum put forward this summer by the British Medical Association. It is true that some allowances, such as "charge pay," have disappeared, and that after the end of the current year the navy, in common with the other armed forces, will be assessed for income tax at the civil rate. Nevertheless, taking all things into consideration, it is estimated that under the new scales there will be an average increase in pay of about 60 per cent.

Beyond the actual increase in full pay, the practical abolition of half pay is recognized to be an immense gain. Under the new scale officers below the rank of surgeon commander while awaiting employment receive full pay up to six months, and a scale intermediate between full and half pay for a further six months. Surgeon captains receive a special rate of £2 8s. a day on promotion if not employed. Surgeon rear admirals receive £2 5s. a day when unemployed, in place of £1 18s.

A point insisted upon by several correspondents is that in dealing with the present list of officers the words "maximum retired pay £600" should be removed from the Admiralty Order.

Old and New Rates Compared.

A naval correspondent, to whom we are indebted for the tabular comparison of the scales of pay given below, sends us the following further notes:

In addition to the improvements in full pay and half pay, the allowances for (1) subsistence, (2) lodging, (3) compensation in lieu of provisions, light, and fuel, and (4) servants' allowance, have all been materially increased. Charge pay of 3s. 6d. a day formerly allowed to medical officers of ships with complements of not less than 650 officers and men has been abolished, also charge pay for surgeon captains 7s. 6d. a day and surgeon commanders 2s. 6d. or 5s., according to seniority, in naval hospitals, and the allowance to medical officers in hospitals in lieu of provisions, fuel, and lights.

On the other hand, 44 specialist allowances of 2s. 6d. a day have been created for officers below the rank of surgeon captain. The rates of retired pay have been substantially increased, the age for compulsory retirement reduced from 55 to 50 in the case of surgeon commanders and from 60 to 55 in the case of surgeon captains. Further, optional retirement at 40 is to be allowed for all ranks at Admiralty discretion.

In Table I the rate of pay which has been in existence since 1911 is compared with the new rate just issued, ignoring the bonus paid since February last, as that was only a temporary measure and is absorbed in the new rate.

So that there shall be no inflation of the new rate, the income tax at civil rates which will be payable after the end of the present financial year is shown against it, using the current scale for the present financial year.

Income Tax Table.

Total Income for the Year from all Sources.	Rates of Tax on			Rate of Abatement.	
	Naval Pay.	Civil Pay.	Unearned.	Naval.	Civil.
£ £	s. d.	s. d.	s. d.	£	£
130 to 160 ...	—	2 3	3 0	Exempt	120
160 to 300 ...	0 9	2 3	3 0	160	120
300 to 400 ...	1 3	2 3	3 0	120	1.0
400 to 500 ...	1 3	2 3	3 0	100	100
500 to 600 ...	1 9	3 0	3 9	100	100
600 to 700 ...	1 9	3 0	3 9	70	70
700 to 1,000 ...	1 9	3 0	3 9		
1,000 to 1,500 ...	2 3	3 9	4 6		
1,500 to 2,000 ...	2 9	4 6	5 3		
2,000 to 2,500 ...	3 3	5 3	6 0		
2,500	3 6	6 0	6 0		

Table II gives a few comparisons of net incomes under the two scales at various periods of service, and shows in a footnote the approximate percentage gain.

TABLE II.

Scale.	Daily Rate.	Yearly Rate.	Rate of Income Tax.	Amount of Income Tax.	Net Income.
On entry:	£ s. d.	£ s. d.	s. d.	£ s. d.	£ s. d.
New	1 4 0	438 0 0	2 3	38 0 6	399 19 6
Old	*0 14 0*	*255 10 0*	*0 9*	*3 11 8*	*251 18 4*
After 6 years:					
New	1 15 0	638 15 0	3 0	85 6 3	553 8 9
Old	*0 18 0*	*328 10 0*	*1 3*	*13 0 8*	*315 9 4*
After 12 years:					
New	2 5 0	821 5 0	3 0	123 3 9	698 1 3
Old	*1 4 0*	*438 0 0*	*1 3*	*21 2 6*	*416 17 6*
After 20 years:					
New	2 13 0	967 5 0	3 0	145 1 9	822 3 3
Old	*1 10 0*	*547 10 0*	*1 9*	*47 7 6*	*500 2 6*
Plus charge pay	*0 3 6*	*63 17 6*			
		611 7 6			

Note.—The gain in net income under the new scale is: On entry, £148 1s. 2d. (approximately 58 per cent.); after 6 years, £237 19s. 5d. (72 per cent.); after 12 years, £281 3s. 9d. (67 per cent.); after 20 years, £322 0s. 9d. (65 per cent.).

TABLE I.—*Scales of Pay Compared.*

	Old Scale.			New Scale.		
	Per Diem.	Income Tax at Naval Rate	Rank.	Per Diem.	Income Tax at Civil Rate.	Rank.
	£ s. d.	s. d.		£ s. d.	s. d.	
On entry	0 14 0	0 9	Surgeon Lieutenant	1 4 0	2 3	Surgeon Lieutenant
After 2 years	0 15 0	0 9	,, ,,	1 4 0	2 3	,, ,,
After 3 years	0 15 0	0 9	,, ,,	1 9 0	3 0	,, ,,
After 4 years	0 17 0	1 3	,, ,,	1 9 0	3 0	,, ,,
After 6 years	0 18 0	1 3	,, ,,	1 15 0	3 0	Surgeon Lieut. Commander
After 8 years	1 0 0	1 3	Surgeon Lieut. Commander	1 15 0	3 0	,, ,, ,,
After 9 years	1 0 0	1 3	,, ,, ,,	1 17 0	3 0	,, ,, ,,
After 10 years	1 1 0	1 3	,, ,, ,,	1 17 0	3 0	,, ,, ,,
After 12 years	1 4 0	1 3	,, ,, ,,	2 5 0	3 0	Surgeon Commander
After 14 years	1 5 0	1 3	,, ,, ,,	2 5 0	3 0	,, ,,
After 15 years	1 5 0	1 3	,, ,, ,,	2 9 0	3 0	,, ,,
After 16 years	1 7 0	1 3	Surg on Comman er	2 9 0	3 0	,, ,,
After 18 years	1 8 0	1 9	,, ,,	2 13 0	3 0	,, ,,
After 20 years	1 10 0	1 9	,, ,,	2 13 0	3 0	,, ,,
After 21 years	1 10 0	1 9	,, ,,	2 17 0	3 9	Maximum as Surg. Commdr.
After 22 years	1 11 0	1 9	,, ,,			
After 24 years	1 13 0	1 9	,, ,,			
After 26 years	1 15 0	1 9	Maximum as Surg. Commdr.			
On promotion	2 5 0	1 9	Surgeon Captain	3 5 0	3 9	Surgeon Captain
After 3 years	2 5 0	1 9	,, ,,	3 10 0	3 9	,, ,,
After 6 years	2 5 0	1 9	,, ,,	3 15 0	3 9	,, ,,
After 9 years	2 5 0	1 9	,, ,,	4 0 0	3 9	,, ,,
On promotion	3 11 0*	2 3	Surgeon Rear Admiral	5 5 0	4 6	Surgeon Rear Admiral

*Approximate; representing £1,300 per annum.

Universities and Colleges.

UNIVERSITY OF LONDON.

Guy's Hospital: Astley Cooper Prize Fund.

Under the authority of the Charity Commissioners, the trustees of the above fund, who are the physicians and surgeons to Guy's Hospital, have been empowered to establish a studentship in connexion with the Gordon Museum of Guy's Hospital. The student will be elected for a period of three years, and will be called the Astley Cooper Assistant to the Curator of the Gordon Museum. The present value of the studentship is about £150 per annum, with an additional sum of £50 for expenses.

In accordance with the terms of Sir Astley Cooper's will, the studentship shall not at any time be awarded to any member of the staff of Guy's or St. Thomas's Hospital or to anyone related by blood or affinity to them.

Particulars regarding the studentship can be obtained from Mr. C. H. Fagge, M.S., Guy's Hospital, London, S.E.1, to whom application for the post should be addressed on or before October 15th, 1919.

St. Bartholomew's Hospital and College.

The following awards have been made:

Entrance Scholarship in Arts (£100): F. A. Bevan. Jeaffreson Exhibition (£50): R. N. Curnow and H. F. Hiscocks (equal). Senior Entrance Scholarship in Science (£75): J. N. Kerr. Junior Entrance Scholarship in Science (£100): E. J. Blackaby and A. B. Cooper (equal).

UNIVERSITY OF LEEDS.

At the Court of the University on September 24th a resolution was adopted in the following terms:

The Council deplore the heavy loss which the university has sustained by the premature death of Dr. W. Angus, Professor of Public Health, and record their appreciation of the great service which he rendered to the School of Medicine and to the citizens of Leeds by his scientific insight, public spirit, and devotion to duty. They desire to express their deep sympathy with Mrs. Angus in her bereavement.

The Pro-Chancellor, Mr. A. G. Lupton, who presided, said that during the war a large proportion of the staff of the university was absent on national and military duties, and since the coming of peace a number of professors had left the university staff and many appointments had been made. The financial position had been difficult, but he hoped that the future would be free from anxiety in this respect. With the enlarged scope of the work and the increased number of students, he foresaw that within a short time the university would have to call upon its friends for funds for additions to the buildings, appliances and facilities to enable the work to be adequately performed. Further developments of the medical school and a larger number of students had caused the council to purchase adjoining property, which was being fitted for this new purpose. A new hall, a new library, and a new students' union were wanted.

A list of names for honorary degrees was submitted and approved; it included Sir Alfred Keogh, G.C.B., G.C.V.O., C.H., and Sir Almroth Wright, K.B.E., C.B.

UNIVERSITY OF ST. ANDREWS.

The following candidates have been approved at the examination indicated:

Third M.B., Ch.B. (*Materia Medica*).—Isabella D. Kilgour, Nona S. Lesslie, Katharine D. Macfarlane, Gracie MacG. McRorie, Elizabeth W. MacVicar, W. L. Tullis.

Medical News.

Dr. A. J. Rice-Oxley, C.B.E., J.P., has been unanimously nominated Mayor of Kensington for the coming year.

A Galton Society for the study of the origin and evolution of man has been formally constituted in New York.

Dr. J. Mackenzie Booth, Lecturer on Diseases of the Ear, Nose, and Throat in the University of Aberdeen, left personal estate of the value of £43,160.

A course of lectures on tuberculosis will be given throughout the autumn session at the Hospital for Consumption and Diseases of the Chest, Brompton. The lectures will be delivered on Tuesdays and Fridays, at 8 p.m., during October, November, and December, commencing October 21st.

In 1918 the number of persons who underwent the antirabic treatment at the Paris Pasteur Institute was 1,805. Of these, 5 died of hydrophobia, a percentage of 0.27. One of the patients, however, was attacked by the disease while under treatment, and another attended irregularly. Deducting these cases, the true death rate was 0.16 per cent. In the first year of the application of Pasteur's method the mortality was 0.94 per cent.

The Secretary for Scotland has appointed Dr. H. Ferguson Watson and Dr. W. D. Chambers to be Deputy Commissioners of the General Board of Control for Scotland, in place of Dr. R. Cunyngham Brown, who has been appointed Director of Medical Services in the Ministry of Pensions, and Dr. C. Macpherson, who has resigned.

The University of Liége has conferred the degree of Doctor of Medicine *honoris causâ* on M. Clemenceau and Mr. Hoover.

At the instance of Dr. Heyerdahl of Christiania, a Scandinavian society of medical radiologists has been formed. Its first meeting is to be held in Copenhagen in 1921.

The French University of Strasbourg will shortly issue to all allied universities an invitation to send delegates to their inauguration ceremony, which is to take place on November 22nd, the anniversary of the entrance of French troops into the city.

The American Public Health Association will hold its annual meeting at New Orleans in October (27th to 30th). The chief subject of discussion will be the health problems of the South, including malaria, typhoid fever, hookworm disease, and soil pollution.

The provision of rewards for motherhood initiated by the late Dr. F. Nuñez in Cuba has extended widely over the island, each of the six provinces being allotted a proportion of the prizes. This year forty-one of the 112 municipalities are offering prizes in the campaign for healthy children.

The University of Toronto has received a bequest of £10,000 from the late Dr. Julius Mickle of London, a graduate of the university. It is to provide two fellowships—one in honour of the donor's parents, the other to be awarded to the student of the university who passes highest in his or her third or fourth year.

The London Medical Exhibition, promoted by the *British and Colonial Pharmacist*, has not been held during the war. The ninth exhibition will be opened on Monday next at the Central Hall, Westminster. Medical men, for whom alone it is intended, are invited to visit it on any day next week between noon and 7 p.m.

Professor William H. Rappard of the University of Geneva has been appointed general secretary of the League of Red Cross Societies. He is a member of the International Committee of the Red Cross, and was for two years associate professor of economics at Harvard University.

Among the war prizes awarded by the French Académie des Sciences are the three Montyon prizes of £100, given respectively to MM. Louis Martin and Auguste Pettit, of the Pasteur Institute, for a memoir on ictero-haemorrhagic spirochaetosis; MM. Weinberg and Seguin, of the same institute, for a research on gas gangrene; and MM. Rouvillois, G. L. Pédeprade, and A. Basset for their studies on war surgery. A prize of £120 was awarded to M. Paul Ravaut for his researches on paludism, and one of £80 to M. Goris for studies on the localization of alkaloids and glucosides in vegetables and on the preparation of catgut.

The late Professor Pozzi was a great connoisseur. His collection, which includes fine examples of mediaeval, Renaissance, and modern art, representative pictures of the best schools, tapestries, Persian miniatures, porcelains, Chinese statuettes and bronzes, Gothic wood sculptures, Oriental carpets, Louis XIII, Louis XIV, and Louis XV armchairs, is to be sold.

The Minister of Public Instruction of the Republic of Uruguay has officially published the general conclusions of the second South American congress of infant hygiene held recently at Montevideo. The congress called on governments to institute a campaign of prophylaxis and assistance for tuberculous children, and advised that suspected cases should be removed from schools and placed in special institutions. Instruction on the prevention of tuberculosis, syphilis, alcoholism, hydatid cysts, and paludism should be given in all schools. The principles of child-rearing should be taught in all primary schools. The strictest uniformity in the collection of statistics should be enforced. A special death certificate should be required for infants in which the fact of illegitimacy and the dietary should be stated. Special precautions should be taken in the early conceptive period and continued till the completion of convalescence. Prizes and grants for nursing women in institutions of infant protection should be founded. Midwives should be supplied to rural districts at the public expense. The need of prenatal prophylaxis of purulent ophthalmia and stringent precautions against the introduction of trachoma by immigrants are insisted on. Dental dispensaries should be attached to all schools.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

DR. W. A. GRIGGS (60, Montpelier Road, Brighton), who is collecting evidence about spiritualism, asks readers to send him, "in strict confidence, the number of patients in their own practice who through spiritualism and its methods have become insane, obsessed, or reduced to a state of debility, nervousness, fear, etc. Apart from all fraud, spiritualism can do much harm physically and mentally."

ASTHMA POWDERS.

A CORRESPONDENT replies to "Antispasmodic" (JOURNAL, September 27th) as follows: The method of compounding is: Dissolve the nitrate of potassium in four times its weight of hot water; pour the solution over the previously mixed powders; allow to stand twenty-four hours, and then carefully dry. Various modifications of the formula are in use, a tendency being to delete the black tea either wholly or partly, substituting other drugs, such as indian hemp, opium, tobacco, aniseed, fennel. However, Sir W. Hale-White in his *Materia Medica* recommends the leaves of stramonium, datura tatula, indian hemp, and lobelia of each ¾ oz., nitre 1 oz., oil of eucalyptus 30 minims, as a combination answering its purpose well.

INCOME TAX.

Q" purchased a practice in May, 1916, but, owing to his enlistment in the army, sold it again in April, 1917. From the figures supplied it would seem that a profit would be made on the working of the practice for the twelve months, but losses incurred on commencing and realizing the practice almost or entirely cover the profit made. The surveyor asks for payment of tax on £350 less £120 abatement for the year 1916-17.

*** The hardship in this case appears to be the legal inability to make any deduction for the loss of capital arising through enlistment, and is accentuated by the fact that our correspondent's military service has, temporarily at any rate, rendered him incapable of doing professional work. We suggest that he place the full facts before the Board of Inland Revenue—either through the local surveyor or by communicating with the Secretary, Somerset House—and ask for special consideration of the circumstances on the ground of abnormal hardship. It seems a case where any power of waiver that the department may have would very properly apply.

LETTERS, NOTES, ETC.

DR. OLIVER OF BATH.

P. W. L." inquires where he can obtain information relative to the life of Dr. Oliver of Bath.

*** In the eighteenth century there were two physicians of Cornish descent bearing the name William Oliver, but it does not appear that they were related. The elder was born in 1659, and died in 1716. His medical studies were interrupted by service in the Duke of Monmouth's expedition as surgeon to the troops. After various adventures he obtained the Licence of the Royal College of Physicians of London in 1692, and was afterwards elected F.R.S. There is some doubt as to whether he practised at Bath, but he wrote a dissertation on the "Bathe Waters," and he was buried in the Abbey Church of that city. William Oliver, the younger, was born in 1695; he studied at Pembroke College, Cambridge, and graduated M.B. in 1720 and M.D. in 1725. Like the elder Oliver, he also studied physic at the University of Leyden, and, like him, was elected F.R.S. From 1725 until his death in 1764 he lived at Bath, and had the leading practice of the city. Ralph Allen of Prior Park was his friend. Oliver was physician to what is now the Royal Mineral Water Hospital, and drew up regulations for the admission and removal of patients. In the board room there is a portrait of him examining patients with Jeremiah Pierce the surgeon. He was the inventor of the famous "Bath Oliver biscuit," and according to the *Dictionary of National Biography*, from which these notes are taken, he confided the recipe to his coachman Atkins, giving him at the same time £100 in money and ten sacks of the finest wheat flour. The recipient opened a shop in Green Street and soon acquired a large fortune.

INSURANCE REMUNERATION.

DR. H. A. WATSON (Worcester) writes: In view of the proposed new terms under the Insurance Act, the enclosed statistics I have just found for 1914 and 1916 may be of interest. Since the dropping of record cards I have not kept such particulars. To my mind the figures show how very poor the pay is at the present rates. These years do not include any epidemics such as occurred last year, when the work was doubled and the rate of pay correspondingly diminished. Another point to notice is that the numbers taken are those of my index slips and the full nominal rate of 7s. is taken. When allowances are made for so-called inflation of list, and if the actual amount received were reckoned, the rate would come out considerably lower.

City of Worcester.

1914.	1916.
Patients on list, 906.	Patients on list, 932.
No. treated, 604=66.6 per cent. sick.	No. treated, 557=60.4 per cent. sick.
Visits and attendances, 4,267 =7 per sick person.	Visits and attendances, 4,167=7.5 per sick person.
906 patients @ 7s.=6,342s.	932 patients @ 7s.=6,524s.
∴ Each visit or attendance =1s. 5¾d.	∴ Each visit or attendance =1s. 6¾d.

County of Worcester.

Patients on list, 235.	Patients on list, 202.
No. treated, 137=58.3 per cent. sick.	No. treated, 107=53 per cent. sick.
Visits and attendances, 1,188 =8.7 per sick person.	Visits and attendances, 745=7 per sick person.
235 patients @ 7s.=1,645s.	202 patients @ 7s.=1,414s.
∴ Each visit or attendance =1s. 4½d.	∴ Each visit or attendance =1s. 10¾d.

PEDICULOSIS OF THE EYELASHES.

DR. M. ESTHER HARDING (London) writes: A case of pediculi of the eyelashes came under my notice about a year ago. A little girl, aged 3 years, was admitted to Plaistow (Fever) Hospital suffering from diphtheria. She was reported by the nurse in charge to have a "dirty" head. On examination it was found that her eyelashes and eyebrows were encrusted with nits, while many small pediculi could be seen crawling in the latter. A weak mercury ointment was ordered and the condition soon cleared up.

MEDICAL PRACTICE IN JAPAN.

IN a recent lecture in praise of the Japanese Hospital under the direction of Professor Shioto established in the Astoria Hotel, Paris, Mme. Adrien Lenoir said that the total number of medical practitioners in Japan, according to the latest census, was 42,404, giving a proportion of 1 to every 1,266 of population; nurses numbered 14,549. The hospitals, some State and others private institutions, were subject to inspection. All nurses must have a diploma, and there was a special licence for male nurses who cup and apply the cautery. Massage is in the hands of special operators, many of whom are blind. There are in Japan 2,363 dentists, 5,461 pharmacists, and 31,048 midwives. Breach of the laws regulating medical practice is punished by suspension of licences, temporarily or permanent.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 23, 24, 26, 27, 28, 29, and 30 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 25 and 26.

THE appointment of certifying factory surgeon at Royton (Lancaster) is vacant.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£ s. d.
Seven lines and under	0 6 0
Each additional line	0 0 9
Whole single column	4 0 0
Whole page	12 0 0

An average line contains six words.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.